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Cambridge Land Assembly Conceptual Planning Study



Proctor & Redfern Limited

Consulting Engineers and Planners

Kitchener

May 1988



The
Proctor & Redfern
Group
Consulting Engineers and Planners

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May 20, 1988

Project No. 86423

Mr. Richard Benson,
Planning and Design Co-ordinator,
Realty Group,
Ministry of Government Services,
777 Bay Street, 16th Floor,
Toronto, Ontario.
M5G 2E5

Dear Mr. Benson:

It is our pleasure to submit the final report entitled "**Cambridge Land Assembly Conceptual Planning Study**". We trust it will provide your Department with the necessary technical background and conceptual planning and design framework to proceed with development of the subject lands, which are a significant component in the future orderly growth of both the City of Cambridge and Region of Waterloo.

We wish to express our thanks to both yourself and Ian Greaves, Co-ordinator, Realty Group, for technical information and editorial review. It has been a most interesting project for the staff of Proctor & Redfern, and we look forward to being able to provide the Realty Group with consulting planning and engineering services on future projects.

Yours very truly,

The Proctor & Redfern Group

Michael D. Sanderson, MCIP, MRTPI
Senior Planner
Kitchener Branch

MDS/mc

MINISTRY OF GOVERNMENT SERVICES

CAMBRIDGE LAND ASSEMBLY

CONCEPTUAL PLANNING STUDY


The Proctor & Redfern Group
665 King Street East
Kitchener, Ontario
N2G 2M4

May, 1988

Project No. 86423

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1.0 INTRODUCTION

1.0 INTRODUCTION

1.1 BACKGROUND

In response to impending growth in the Kitchener-Waterloo-Cambridge area, the **Ontario Housing Corporation (O.H.C.)** purchased 1202 hectares (+/- 2,970 acres) of land in 1968, in what is now the City of Cambridge, for the purpose of developing a new community. In 1975, a planning study entitled A Plan for the Freeport Community was undertaken by the firm of John Bousfield Associates with William E. Coates and Associates and Proctor & Redfern Ltd. This plan, which never received municipal approval in its entirety, delineated an employment area in the southern section of the land assembly and residential communities to the north and east. Although part of the employment area was eventually zoned for industrial use, the land continued in agricultural use under lease.

In 1984 and 1985 the Ontario Land Corporation (O.L.C.), which had assumed the land management and development functions of the O.H.C., commissioned studies to determine the long- and short-term development potential of the Cambridge Land Assembly (Planning Initiatives 1984, 1985)(Dillon, 1985). Applications for Official Plan amendments to permit estate residential development along Riverbank Drive and south of Maple Grove Road were subsequently submitted to the City of Cambridge.

The purchase of approximately 160 hectares (+/- 395 acres) of Provincial land by the **Toyota Motor Corporation** in December, 1985 and the rezoning of the parcel by the Minister's zoning order had immediate implications for the development of the entire land assembly. It was anticipated that spinoff development associated with a major automotive plant would create a demand for industrial land in the vicinity of Toyota. The municipal services to be constructed under the Province of Ontario agreement with the Toyota Motor Corporation were oversized to accommodate the development of an additional 324 hectares (+/- 801 acres).

In July 1986, **The Proctor & Redfern Group (P&R)** was retained by O.L.C. to undertake conceptual planning and engineering analysis of the Provincial Land Assembly in Cambridge. The objective of the study, as stated in the Terms of Reference (Appendix A), was:

"...to determine the most suitable and compatible land uses given the location of the Toyota Motor Corporation assembly plant and the capacity of hard services being installed at the present time".

In addition to developing the most feasible development scenario for the land assembly, in light of the development constraints and opportunities, this study is intended to satisfy Section 5.9 of the **Regional Official Policies Plan**, which requires that studies be done prior to any amendments to the **Cambridge Official Plan**, and, to provide the basis for the resolution of the deferred portion of **City of Kitchener Official Plan Amendment No. 27** for the area known as Pioneer Tower East.

During the course of the study, on April 1, 1987, all assets of the O.L.C. were transferred to the **Ministry of Government Services (M.G.S.)**. Reference has, therefore, been made to both agencies in this report and the terms "O.L.C." and "M.G.S." are used interchangeably.

1.2 STUDY AREA

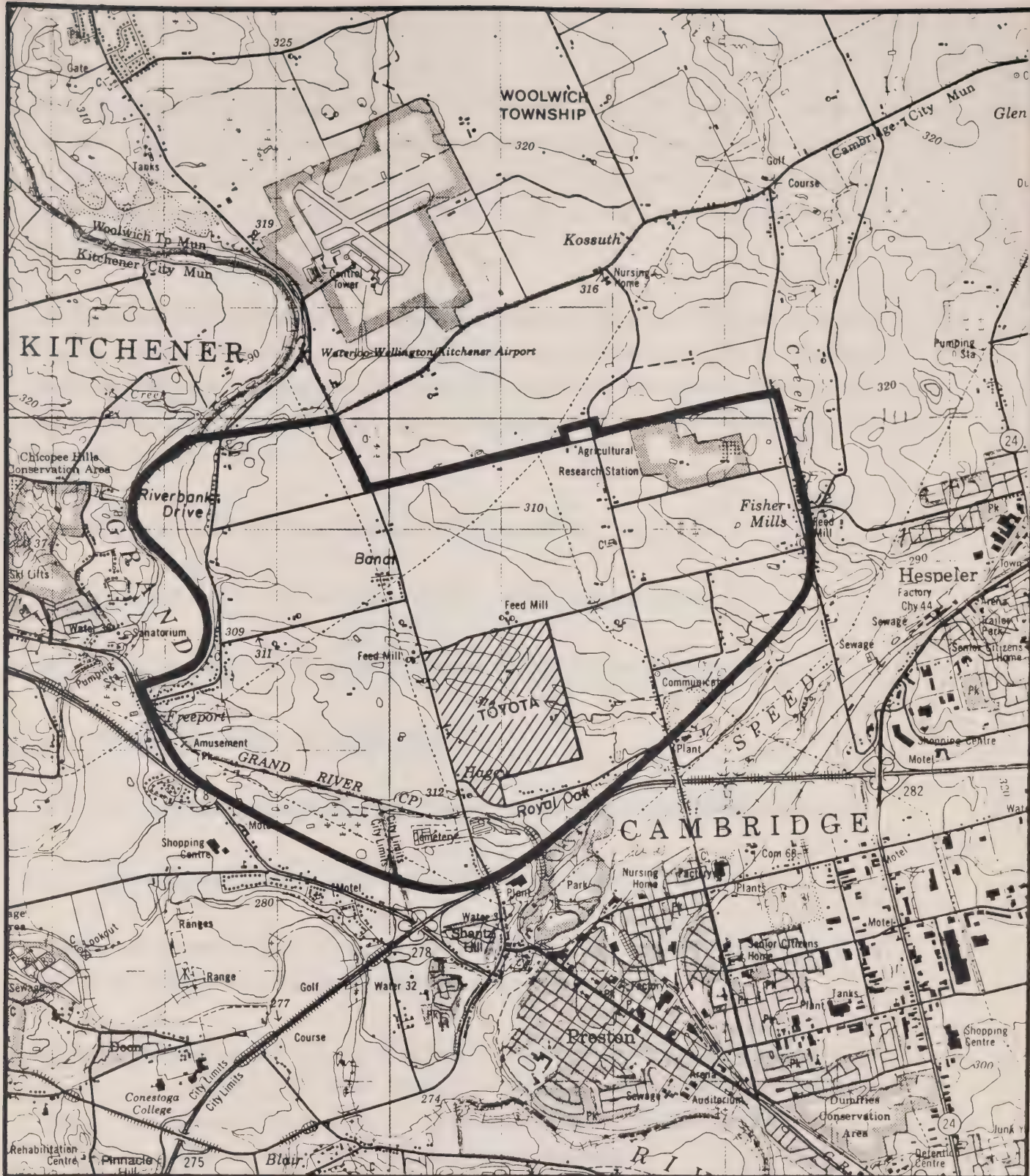
The limits of the study area and the location of the Toyota site are shown on Map 1 - Location Map.

In addition to the 1202 hectares (+/- 2,970 acres) under M.G.S. ownership, the study area includes approximately 46 hectares (+/- 114 acres) in the City of Kitchener originally purchased by the Ministry of Transportation and Communications for the purposes of constructing a new Highway 8 By-pass. Also included are the **Ontario Ministry of Agriculture and Food's (O.M.A.F.)** agricultural research station north of Maple Grove Road, privately owned farms adjacent to the land assembly, lands owned by **Ar-riscraft** and the existing residential settlements of Freeport, Riverbank Drive, Banat Road, Royal Oak Road and Fisher Mills. Land ownership within the study area is shown on Map 2.

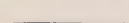

1.3 METHODOLOGY

In order to establish the planning context for the development of land use concepts, provincial, regional and municipal policy documents were reviewed. Relevant policies are described in **Chapter 2.0** of this report.

Information regarding the physical setting, hard services and transportation networks was obtained from studies previously commissioned by O.L.C., municipal planning and engineering reports and liaison with other consulting engineers engaged in the provision of services to the Toyota plant and Provincial land.



LEGEND

-  STUDY AREA BOUNDARY
-  TOYOTA SITE

Map 1 Location Map



Ontario Land Corporation
Cambridge
Conceptual Planning Study

SCALE 1:50,000

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Kitchener

DWG. NO.: E-86423-PI
DATE: APRIL 1988

Chapter 3.0 describes the transportation facilities existing and planned for the study area. **Chapter 4.0** details the physical resources and constraints imposed on development. **Chapter 5.0** reviews the servicing infrastructure which will be in place upon completion of Phases 1 and 2 of the Provincial cost sharing agreement with the Regional Municipality of Waterloo and the City of Cambridge related to the Toyota services and the infrastructure oversizing.

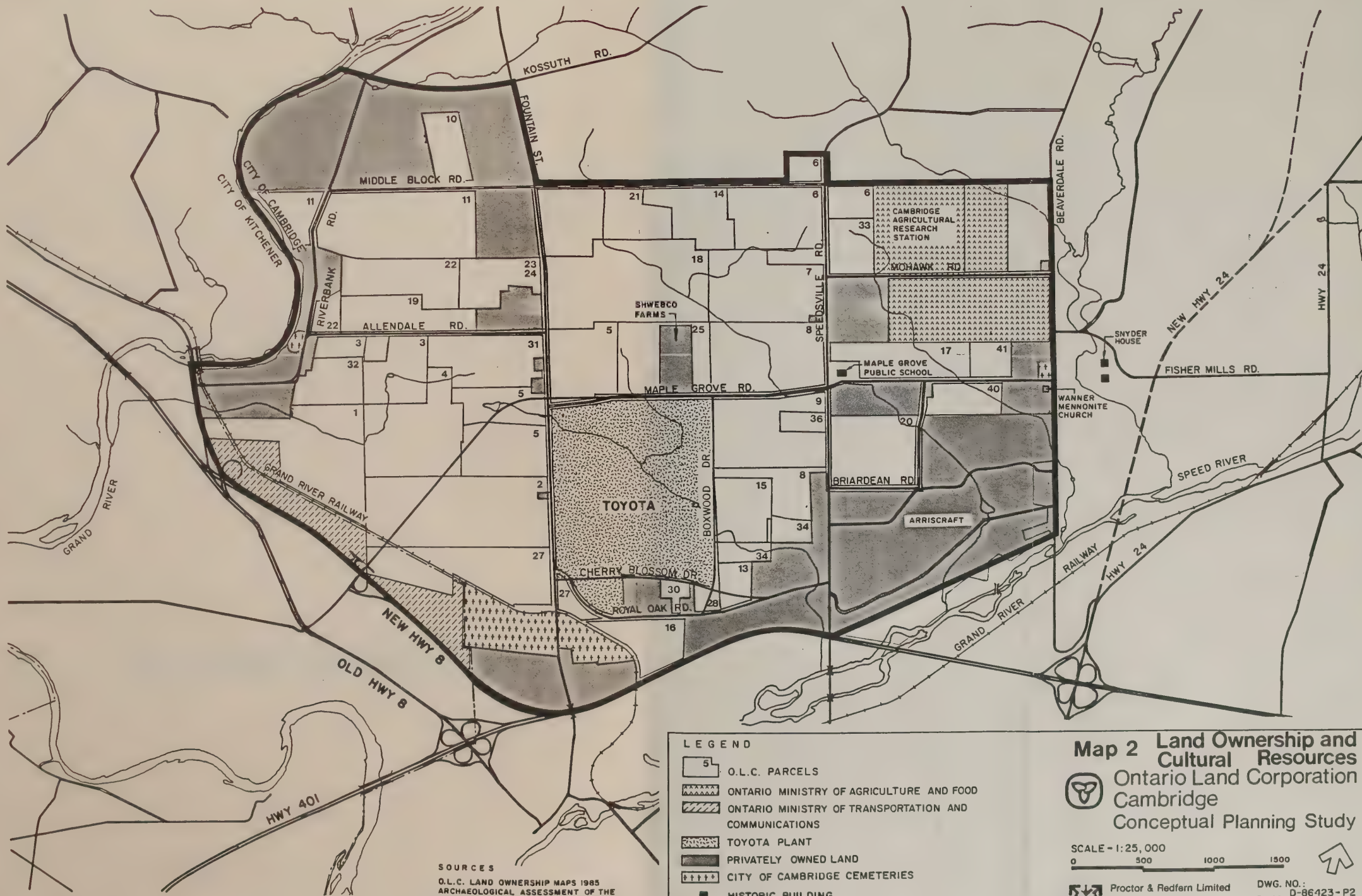
On the basis of this information, development constraints and opportunities were identified and **three** preliminary **Alternative Concepts** were developed. These concepts defined the land uses to be considered and their general arrangement. A **fourth Alternative Concept** was developed following an initial review by City and Regional staff. The land use concepts are described in **Chapter 6.0** and presented on Maps 11 to 14.

The four concepts were then evaluated using the following criteria:

- a) conformity with Regional and City Official Plans and proposed amendments;
- b) impact on agricultural land and other provincial and regional resource policy interests;
- c) compatibility with surrounding land uses;
- d) serviceability of land use proposals identifying current and future infrastructure requirements;
- e) accessibility and traffic generation of proposed land use concepts.

The **Revised Concept - Map 15**, resulted from modifications to Alternative Concept 4 based on evaluation of impacts and the comments of City, Region and Provincial staff.

Hemson Consulting Ltd. was then retained by M.G.S. to analyze the market potential of the land uses proposed on the Revised Concept. On the basis of the findings of this study, which is summarized in **Chapter 7.0** some adjustments were made to the land use allocations. The final concept is referred to as the **Recommended Concept - Map 17**, and is described in **Chapter 8.0**.



SOURCES
 O.L.C. LAND OWNERSHIP MAPS 1985
 ARCHAEOLOGICAL ASSESSMENT OF THE
 PROPOSED TOYOTA ROADS DEVELOPMENT
 ARCHAEOLOGICAL RESEARCH ASSOCIATES 1986

LEGEND

- O.L.C. PARCELS
- ONTARIO MINISTRY OF AGRICULTURE AND FOOD
- ONTARIO MINISTRY OF TRANSPORTATION AND COMMUNICATIONS
- TOYOTA PLANT
- PRIVATELY OWNED LAND
- CITY OF CAMBRIDGE CEMETERIES
- HISTORIC BUILDING
- STUDY AREA BOUNDARY

Map 2 Land Ownership and Cultural Resources

Ontario Land Corporation
 Cambridge
 Conceptual Planning Study

SCALE - 1:25,000

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 Kitchener

DWG. NO.:
 DATE: 0-86423-P2
 APRIL 1988

2.0 POLICY FRAMEWORK

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2.1 PROVINCIAL POLICY STATEMENTS

The **Planning Act, 1983** provides that the Province may adopt policy statements to establish its objectives on planning matters of provincial significance.

The Ministry of Agriculture and Food has prepared a draft policy statement, Foodland Preservation. Until it is approved by Cabinet the **Foodland Guidelines** adopted by the Province of Ontario in 1978 continue as the effective policy statement.

The **Foodland Guidelines** require that consideration be given to agricultural capability prior to conversion of farm land to non-farm uses. The Canada Land Inventory agricultural capability mapping indicates that the Provincial Land Assembly is generally ranked Class 1 to 3 with lower capability land along watercourses and wetland areas. Justification of the land use changes will be required under these guidelines.

The **Mineral Aggregate Resources Policy Statement** was approved by Provincial Cabinet May 9, 1986. This document establishes mineral aggregate resources as a matter of Provincial interest and includes policies recognizing the essential non-renewable resource, the need to ensure its availability and to protect the natural environment through the approval and licensing of new or expanding operations, operating standards and rehabilitation.

The primary aggregate resources within the land holding are identified in later sections of this report. Their protection and potential recovery prior to urban development will require the staging of development, on site use or recovery and stockpiling of the resource.

The regional and local policy framework is of primary importance in the implementation of provincial policy. Regional and municipal official plans must "have regard" for Provincial policy statements and incorporate policies appropriate to their local environment.

2.2 REGIONAL OFFICIAL POLICIES PLAN

The Regional Municipality of Waterloo adopted its **Regional Official Policies Plan (R.O.P.P.)** in 1976. This was the first regional official plan to be approved by the Minister in Ontario. Since then the plan has been through a major review and was repealed and re-adopted in October of 1985. During the course of this study, the re-adopted plan has been before the Minister and modifications proposed.

The **Settlement Area Policies** in the R.O.P.P. define the limits of urban settlement within Settlement Policy Area "A". This area is intended to provide sufficient land for urban expansion within the planning period (to the year 2011) and to accommodate a design population of approximately 443,000 persons. Settlement Policy Area "A" policies discourage enlargement of the urban area. Any proposal to extend Area "A" requires extensive evaluation based on demographics, regional services and facility requirements and cost, need, piped services cost and capacity, agriculture impact, resource area impact, conformity to environmental policies and other matters of Regional concern.

The policies encourage local municipalities to address interim use and staging of development in their Official Plans and discourage development on private water or sewage services unless designated in local Official Plans.

A specific policy from the Regional Plan applies to the Provincial Land Assembly in Cambridge. Section 5.9 states:

"...will require that studies be conducted to determine the long term pattern and sequence of development of land uses, transportation facilities and services for the lands currently owned by the Province of Ontario in the City of Cambridge, north of Highway 401, prior to the consideration of an amendment to the City of Cambridge Official Plan for the creation of major expansion of settlement uses in the land bank."

This current study is intended to satisfy this requirement. The study will provide the same level of technical detail for all developable lands within the Study Area; in particular, both the Ministry of Transportation and Communications (M.T.C.) holdings adjacent to New Highway No. 8 as well as the remaining Ministry of Government Service (M.G.S.) lands. Both areas are located in the City of Kitchener. As in the case with M.G.S.'s Cambridge land holdings, the level of detail included in this report is sufficient to resolve any outstanding land use and related issues and form the basis for municipal consideration of amendment(s) to the City of Kitchener Official Plan to permit development of the designated lands for settlement uses.

Settlement Policy Area "E", shown on Map 3, Planning Framework, defines the rural area and gives priority to environmental and rural resources within this policy area. The designation of additional settlement areas within Settlement Policy Area "E" is restricted. Any new designations must comply with criteria similar to those outlined above and must be located over 1600 metres away from existing settlements.

The **Rural Resources** (Chapter 6.0) policies of the R.O.P.P. assign priorities to the use of land within Settlement Policy Area "E". Environmentally Sensitive Policy Areas (E.S.P.A.) as designated in the R.O.P.P. have the highest priority. There are no designated E.S.P.A.'s within the Study Area.

Farming is assigned as the second priority and Agricultural Resource Policy Areas are designated in the R.O.P.P. Prime agricultural land is designated "Agricultural Resource Policy Area "A" which includes Class 1 and 2 agricultural land. The majority of the Settlement Policy Area "E" land within the Study Area is designated prime agricultural land with the exception of the valley land east of Speedsville Road and a major woodlot north of Mohawk Road.

Forestry is assigned third priority and policies provide for protection and management of woodlots as defined in the Regional Tree Cutting By-law. Policies prohibit the use of woodlots for non-farm-related residential, commercial or industrial use except where permitted by registered plans and development agreements containing environmental and tree saving plans. Forest management agreements between private landowners and the Ministry of Natural Resources (M.N.R.) are encouraged as well as the continued forest acquisition and reforestation program of the Region and M.N.R.

Sand and gravel resources are accorded fourth priority within Settlement Policy Area "E". High quality known reserves are designated "Mineral Aggregate Resource Policy Area "A" in the R.O.P.P. This designation is based on the Provincial Mineral Aggregate Resource Areas of primary significance identified by the Ministry of Natural Resources. Policies favour the extraction of the resource prior to development, the protection of the reserves through appropriate land use designations and a thorough evaluation of any proposals for new pits or quarries. In areas designated for settlement purposes, aggregate extraction prior to development, on-site use and the staging of development is encouraged.

The high quality reserves within the study area are identified on Map 6 - Aggregate Resources and are described in greater detail in Chapter 4.0 of this report.

Environmental Protection (Chapter 7.0) policies in the R.O.P.P. provide for the protection of floodplain land and Environmentally Sensitive Policy Areas.

The Speed River floodplain forms the southern limit of the study area and the Grand River floodplain the north west limit. As previously noted there are no E.S.P.A.'s within the Study Area.

The **Urban Development Phasing Policy** (Section 2.9) of the plan designates an "Urban Envelope" and policies for Phase 1 and 2 Development Areas within the urban envelope. The provincial and private land west of Fountain Street and the Toyota site east of Fountain Street south of Maple Grove Road are within the Phase 1 Development Area. The balance of the Provincial Land Assembly is outside of the defined urban envelope.

The Proposed Land Use designations shown on Map 1 of the **Cambridge Official Plan** are reproduced on Map 3 - Planning Framework in this report. These designations reflect the adoption and approval of Official Plan Amendment No. 20 - Toyota Motor Corporation.

A "Class 2 Industrial Use District" or general industrial use area is designated on land within the assembly west of Fountain Street and north of the Grand River Railway and east of Fountain Street on the Toyota site. The existing Arriscraft manufacturing facility is also designated "Class 2 Industrial Use District".

The area south of Royal Oak Road to Highway 401 and along the Highway 8 By-pass is designated "Class 1 Industrial Use District" or corridor industrial area. This designation provides for a wider range of service uses than the general industrial designation and requires higher site development standards.

"Open Space Use Districts" are designated along the tributary watercourses west and east of the industrial areas, along the Grand River valley lands west of Riverbank Road and the two cemeteries on opposite sides of Fountain Street. Rural residential designations reflect existing settlements along Riverbank Road and Banat Road. Suburban residential designations include the Royal Oak Road area, the west side of Speedsville Road, the proposed Arriscraft subdivision and the Fisher Mills area.

The balance of the study area and the largest portion of the Provincial Land Assembly is designated "Foodlands" in the Cambridge Official Plan, and Settlement Policy Area "A" in the Region's Official Policies Plan.

Transportation (Chapter 10) policies define Trunk Roads (Provincial Highways) and Primary Roads (Regional Roads) and designate them in the plan. Policies have been adopted regarding road construction and operation, designated road allowances, noise abatement, public transit, railway and airport service.

The existing and proposed major roads are shown on Map 4 - Transportation and discussed in greater detail in the following chapter.

2.3 CITY OF CAMBRIDGE OFFICIAL PLAN

The **City of Cambridge Official Plan** was adopted by Cambridge Council on July 19, 1982 and received partial approval with modifications by the Region of Waterloo on May 19, 1983.

The City of Cambridge has adopted "**The Conservation Principle**" as the primary goal in its planning and development policies (Section 1.1). The historical settlement pattern, based on the presence of two major rivers and the natural and cultural resources of the City reflect part of the basis for this goal. The plan encourages the conservation of resources through maximum use of existing urban land, protection of farmland and natural areas, energy efficient land use and the preservation of heritage resources.

The policies of the plan are intended to provide more than sufficient industrial and residential land than will be required and with that part of the Provincial Land Assembly in northern Cambridge within the Settlement Pattern Policy Area "A" of the R.O.P.P. provide long term protection to the prime foodlands and major open space resource areas (Section 1.1.4).

The **Economic Development Strategy** (Section 1.3) includes the designation of principle employment areas and policies defining Industrial Use Districts. An area north of Highway 401 including the Toyota site as shown on Map 2 in the Official Plan is designated a principal employment area.

The **Foodlands** policies (Section 3.8) assign priority to farming on land with Class 1, 2 or 3 soil capability. A specific policy applies to the Provincial Land Assembly. Section 3.8.5 recognizes the continuing agricultural use of the land designated "Foodlands" while enabling Council to pass By-laws permitting development by M.G.S. for other appropriate uses subject to the land being within Settlement Pattern Policy Area "A" of the R.O.P.P., that the studies required in Section 5.9 of the R.O.P.P. are completed and an Official Plan Amendment has been adopted to redesignate the land for the proposed use.

The Cambridge Official Plan also designates a **Mineral Aggregates Resources Area** and adopts policies for the use of these lands (Section 2.8.6). A portion of the Provincial Land Assembly east of the Toyota site and west of the Arriscraft land is designated as such. The designation is in conformity with the designation in the Regional Plan.

The plan also designates major transportation facilities.

2.4 CITY OF CAMBRIDGE ZONING

The City of Cambridge has approved a new comprehensive **Zoning By-law** which implements the policies of the Official Plan. The zoning on the Provincial Land Assembly substantially implements the land use designations in the Official Plan. The industrial area west of Fountain Street is zoned predominantly M3 - General Industrial, M4 - Heavy Industrial and the private land north of Highway 401 is zoned M2 - Corridor Industrial. The Toyota site has been rezoned to M3 - General Industrial and the Arriscraft site (E)M6 Extractive Industrial. The balance of the study area is zoned "A" Agriculture or "R" Rural Residential.

2.5 CITY OF KITCHENER OFFICIAL PLAN

The **Official Plan** of the City of Kitchener Planning Area was adopted by Kitchener Council in December of 1977 and approved by the Minister of Housing in June of 1979. Over sixty (60) amendments to the Official Plan have been approved by Regional Council or the Ontario Municipal Board since its adoption. Most of these amendments have been site specific in response to development applications, however several have been secondary plan amendments such as O.P.A. # 27 - Pioneer Tower East, or policy amendments.

The Kitchener Official Plan (K.O.P.) has two major sections; **Section IV Comprehensive Policies** and **Section V Plan for Land Use**. Section IV provides for growth and development policies, establishes City structure and urban design policies as well as policies for major land uses, transportation and other City-wide policy concerns.

A small portion of the esker, north of Maple Grove Road is designated as a primary aggregate resource area in the Kitchener Official Plan and is subject to the Aggregate Extraction Policies of the plan. These policies encourage extraction of the resource prior to development except where specific conditions exist. Section IV.13x of the Official Plan states:

- "x) Within lands shown on Map 1 (K.O.P.), "Plan for Land Use" protect prime aggregate resource areas identified on Map 3 (K.O.P.), "Primary Aggregate Resource Areas" by encouraging extraction prior to development except where, in consultation with the Ministry of Natural Resources:
- a) the extraction of aggregate is unfeasible due to the quality, quantity, or other development constraints;
 - b) the need for the land use or activity outweighs the value of the aggregate resource;
 - c) extraction would be incompatible with the existing surrounding land use; or,
 - d) consideration is given to extraction in conjunction with or prior to the development of the land.

In the preparation of the City's Staging of Development Report, give consideration to the extraction of aggregate shown on Map 3, "Primary Aggregate Resource Areas".

The extraction of aggregate in this area and its conformity to the Official Plan policies is described in subsequent chapters.

Section V defines the land use designations which are denoted on Map 1 "Plan for Land Use". The M.G.S./M.T.C. land within the City of Kitchener is predominantly designated as either Industrial or Major Open Space. There is also a small area of land north of and adjacent to King Street, near Riverbank Drive, which has been designated in the Official Plan as Service Commercial. The Provincial Land Assembly is also subject to a specific Area Policy No. 46 which sets out development policies for the Pioneer Tower East area. The designations as established on the "Plan for Land Use" map and in the specific area policy were adopted by Kitchener Council by Amendment No. 27 to the Official Plan for the Pioneer Tower East Area.

2.6 O.P.A. NO. 27 - PIONEER TOWER EAST

This amendment to the Official Plan was adopted by Council on February 13, 1984. The purpose of the amendment was to extend the Plan for Land Use boundary into the Pioneer Tower East area and designate this area for specific land use. Prior to this amendment the area was not designated and the only land use control was the former Township of Waterloo zoning By-law which zoned the land Industrial. This amendment contains specific policies relating to development of the area including the following reference to the M.T.C. land:

- "i) Recognize that the boundaries of the Major Open Space designation adjacent to the proposed Highway 8 By-pass are generally shown and acknowledge that they will be defined more accurately following further studies without the necessity for an Official Plan Amendment."

Prior to adoption of the amendment the M.T.C. advised the City of Kitchener that it objected to the Major Open Space designation; the perception being that industrial zoning rights were at risk, devaluing the surplus land prior to sale.

Following adoption by Council, M.T.C. continued to express its concern to the Region about the implications of the amendment. Modifications were proposed to the Region by M.T.C., in particular, pertaining to the specific area policy which dealt with further extension of the Open Space designation.

When O.P.A. No. 27 came before Regional Council for approval, Council deferred this section at the request of the M.T.C.

The present status of the amendment is that all matters have been approved by Regional Council or the Ontario Municipal Board save and except Policy IV.77.X/vi i) which was deferred pending the outcome of this study and specific request by M.T.C. to reconsider.

2.7 ZONING BY-LAW 848A

This By-law was approved by the former Township of Waterloo prior to this area being incorporated into the City of Kitchener on January 1, 1973. The By-law zones the Provincial land within Kitchener as Industrial, Residential and Highway Commercial. This zoning will continue in force until such time as M.T.C./M.G.S. or subsequent owners bring forward specific development proposals for consideration by the City.

2.8 KITCHENER ZONING BY-LAW 87-67

This By-law is the new industrial and open space zoning that the City has developed as part of its continuing comprehensive review and update of the municipality Zoning By-laws. It received Provincial approval by an O.M.B. order on April 14, 1988. The effective date of the document is, however, April 13, 1987, the date it was approved by Council.

By-law 87-67 proposes several zoning categories that are relevant to the study area including Business Park (B1), Business Park Service Centres (B3), and Open Space and Recreation (P5) zones.

It is anticipated that any development proposals for the Kitchener Provincial land would be implemented through the application of appropriate zones of this By-law, upon its final adoption by Council.

3.0 TRANSPORTATION

3.0 TRANSPORTATION

The Provincial Land Assembly is situated along the major transportation corridor in Ontario - Highway 401, and enjoys easy access to the road network which links the nearby population centres of Cambridge, Kitchener-Waterloo and Guelph.

Rail service is provided by the Grand River Railway which follows the Kitchener/Cambridge municipal boundary in the southwestern section of the study area.

The Waterloo-Guelph Regional Airport is located in Woolwich Township, immediately to the north of the Study Area. The airport has facilities for freight and passenger flying.

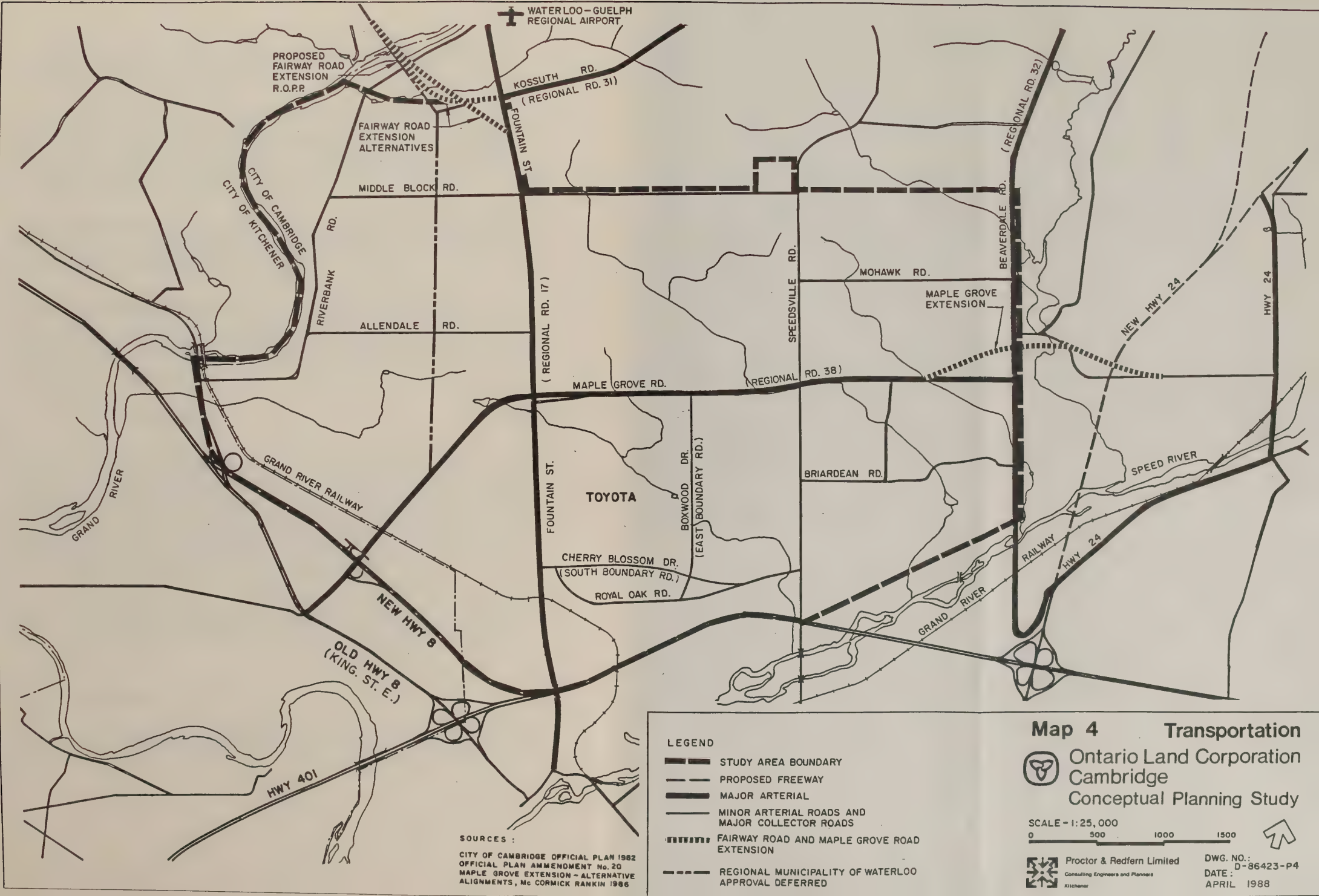
Existing and future transportation facilities are shown on Map 4 - Transportation. This map also depicts the Cambridge Official Plan road designations.

3.1 EXISTING ROAD NETWORK

The Provincial Land Assembly will ultimately be served by three Provincial highways. Highway 401, which provides convenient access to the population centres of Metropolitan Toronto, Quebec and Southwestern Ontario, forms the southern boundary of the Study Area. New Highway 8, a four lane expressway directing eastbound traffic to Highway 401 forms the southwestern boundary. Old Highway 8 (King Street) linking Kitchener-Waterloo and Cambridge, continues to carry south and westbound traffic. The proposed Highway 24 Hespeler By-pass will be completed in 1992, providing an alternate route to Highway 401.

These highways have been designated trunk roads in the Regional Official Policies Plan and are subject to M.T.C. control regarding access, building setbacks and signage adjacent to them.

Within the Study Area, road works which have been completed under Phase 1 of the Toyota Servicing Agreement provide improved access to the interior of the site. Appendix "D" presents a summary of the agreement. Maple Grove Road (Regional Road 38) has been extended as a two lane regional road from Old Highway 8 (King Street) to Fountain Street and will serve as the major east west arterial. Fountain Street (Regional Road 17), which links Cambridge to the Highway 7 corridor in the north, has been upgraded to four lanes between Maple Grove Road and Royal Oak Road.



New roads have been constructed on the east and south boundaries of the Toyota site, linking Maple Grove Road, Royal Oak Road and Fountain Street.

A number of routes have been under consideration for the Maple Grove Road link to the Highway 24 Hespeler By-pass. The Region has now approved an alignment as shown on Map 4, Transportation. This alignment was adopted by Amendment No. 27 to the Cambridge Official Plan on July 13, 1987 and approved by Regional Council on October 15, 1987.

Until the Maple Grove Road extension to the Highway 24 By-pass is completed, Beaverdale Road (Regional Road 32), a north-south arterial which forms the eastern boundary of the Study Area, will provide a connection to the Highway 24/401 interchange.

These roads have been designated "Primary Roads" in the Regional Official Policies Plan. Access to Regional roads is restricted to protect the traffic service function of the road network. Residential development adjacent to Regional roads will be assessed for potential noise impacts at the time of submission of plans of subdivision.

3.2 FUTURE REQUIREMENTS

A traffic study prepared by McCormick Rankin (January, 1987) shows that a number of road improvements will be required as development proceeds within the Study Area. These improvements will be undertaken when actual traffic volumes warrant the work and include the widening of Maple Grove Road, an interchange at New Highway 8 and an upgrading of Fountain Street. A Fairway Road/Fountain Street link involving the extension of a road across the Grand River will be required some time after Phase 1 development of the Provincial lands is completed.

The McCormick Rankin study used land absorption rates of 10, 20 and 30 hectares (+/- 25, +/- 50 and +/- 75 acres) per year and high and low traffic trip generation rates to establish a time frame for the future road works.

3.2.1 Maple Grove Road

Maple Grove Road will eventually require widening from two to four lanes along its entire length beginning with the most westerly sections.

The timing and estimated cost for each section are as follows:

a) **Old Highway 8 to Fountain Street**

Widening to four lanes will be required between the years 1988 and 1992 at an estimated cost of \$750,000.00. The four lane road will reach capacity between 1991 and 2001 at which time further widening or the development of an additional Kitchener link will be required.

b) **Fountain Street to Speedsville Road**

Between the years 1990 and 1996, this section will require widening at an estimated cost of \$830,000.00.

c) **Speedsville Road to Beaverville Road**

Widening to four lanes will be required between the years 1991 and 1998 at an estimated cost of \$1,550,000.00.

d) **Beaverville Road to New Highway 24**

Widening will be required between the years 1991 and 1998 at an estimated cost of \$1,588,000.00.

3.2.2 Old Highway 8

Development within the Provincial Land Assembly will increase traffic volumes on Old Highway 8, which is already at or near capacity. An interchange will be required, when warranted, at the Maple Grove Road and New Highway 8 to alleviate congestion on Old Highway 8 between Maple Grove Road and Freeport Road.

Widening will likely be required between Maple Grove Road and Highway 401 between the years of 1990 and 1997. North of Freeport, the four lane roadway is expected to reach capacity between 1988 and 1989. Alternative solutions include a further widening of Old Highway 8 to six lanes, widening King Street East and/or construction of the Fairway Road/Fountain Street link across the Grand River.

3.2.3 Fairway Road/Fountain Street Link

The construction of a Grand River crossing in the vicinity of Fairway Road in Kitchener has been under consideration for some time and is provided for in the Regional Official Policies Plan. A route location and feasibility study (Proctor & Redfern, 1979) included the evaluation of alternative alignments and the development of a functional design.

The traffic study indicates that traffic volumes generated by development of the Provincial Land Assembly will create a need for a river crossing. The construction of a Fairway Road/Fountain Street link has been suggested as an alternative route to Kitchener when Maple Grove Road between Old Highway 8 and Fountain Street reaches capacity. This is expected to occur between the years 1991 and 2001.

Cost estimates for the project include \$7,900,000.00 for the extension of Fairway Road to Fountain Street and \$2,500,000.00 for the widening of Fountain Street from two to four lanes which will be required between the years 1992 and 2005.

4.0 PHYSICAL DEVELOPMENT CONSTRAINTS

4.0 PHYSICAL DEVELOPMENT CONSTRAINTS

4.1. TOPOGRAPHY

The Provincial Land Assembly is located on a gently rolling glacial till plain which lies between the Grand and Speed Rivers.

The few topographic constraints to development are associated with two glacial features; the esker in Kitchener and the drumlin just south of Freeport, as well as the drainage system. These features are shown on Map 5 - Soils and Topography.

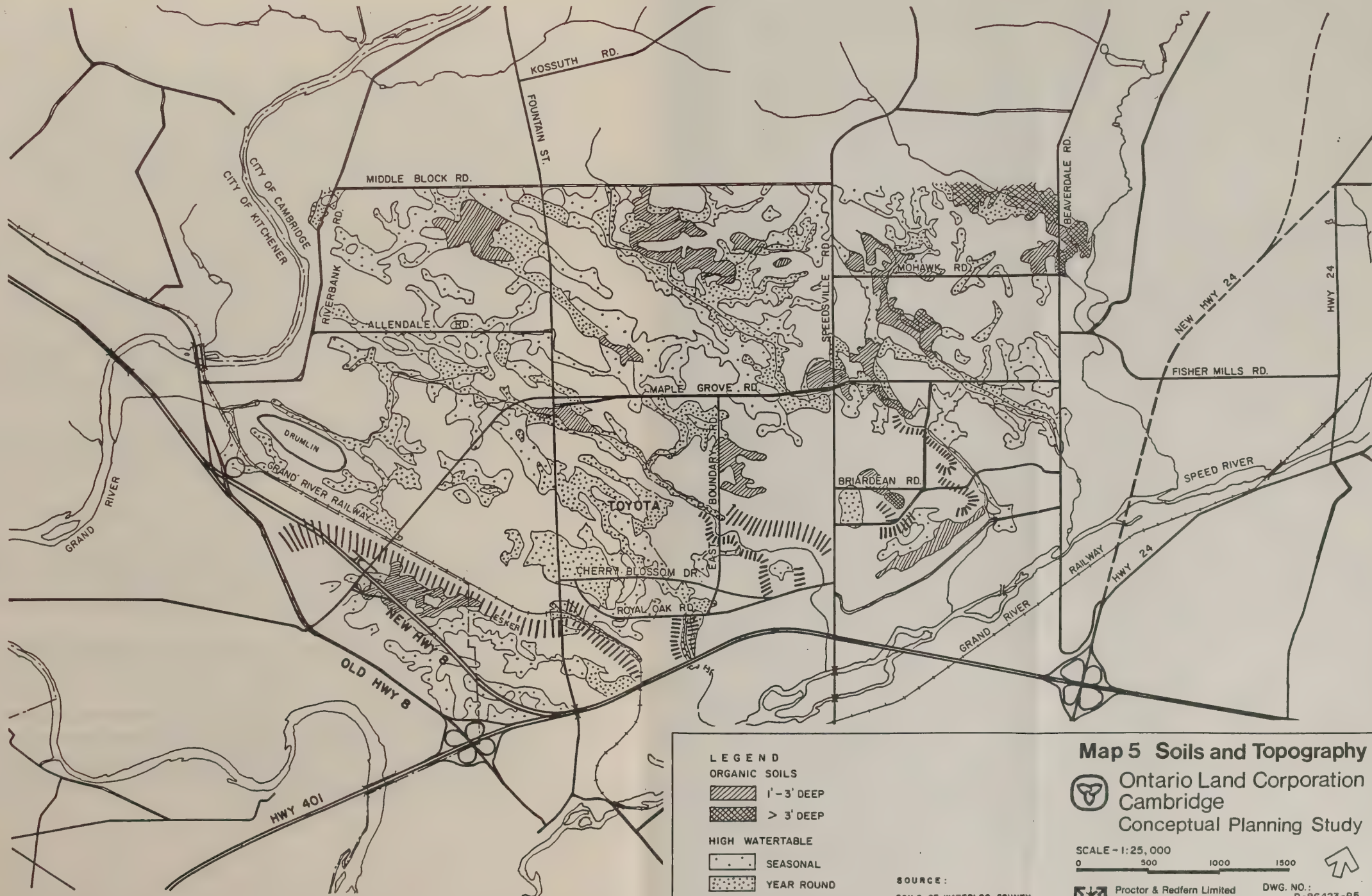
The esker, a prominent ridge of granular material runs along the south side of the Grand River Railway. Its steep slopes severely restrict the buildable area in the Kitchener portion of the Study Area and limit access from the north.

The low area to the north of the Maple Grove Road extension is surrounded by fairly steep slopes, particularly on the north side of the drumlin.

Glacial ice moving in a southeast to northwest direction has created what is known as fluted topography or land surfaces having smooth, straight parallel channels (Presant, 1971). These channels later served to carry meltwater from the receding ice mass to the Grand and Speed River Valleys which formed a major spillway system. Some of the old channels remain today as tributaries of these rivers.

Steep escarpment-like banks are found along the Grand and Speed Rivers, where the Provincial lands are far above the floodplain. Water erosion has created deep gullies along the lower reaches of the watercourses draining into the Speed River. Steep slopes also occur elsewhere along these creeks in the eastern part of the site.

In general, severe topographic limitations are confined to the outer edges of the Provincial Land Assembly.



LEGEND

ORGANIC SOILS

1'-3' DEEP

> 3' DEEP

HIGH WATERTABLE

SEASONAL

YEAR ROUND

STEEP SLOPES

Map 5 Soils and Topography



Ontario Land Corporation
Cambridge
Conceptual Planning Study

SCALE - 1:25,000

0 500 1000 1500



SOURCE:

SOILS OF WATERLOO COUNTY
REPORT No. 44 OF THE
ONTARIO SOIL SURVEY 1971



Proctor & Redfern Limited
Consulting Engineers and Planners
Ritchner

DWG. NO.:
D-86423-P5
DATE:
DECEMBER 1986

4.2 SOILS

The differentiation in soil characteristics is largely the product of the drainage system. The soil parent materials were deposited either directly by glaciers to form the loam till soils found in the northwest, or transported by meltwater to form an outwash plain with its sandy loam soils to the east and south. Poorly drained soils are associated with the watercourses. The distribution of these soils is shown on Map 5. Areas of high water table or organic deposits which are not found along an existing drainage channel provide an indication of where ancient streams that have since disappeared were located.

There are two reasons for this association. The glacial material in this area was deposited in two layers, an underlying clay till sheet and a more recent granular layer. Where the upper layer is relatively deep, the soils are well drained and present few problems for construction. Along the stream beds, soils of the same series are often imperfectly or poorly drained where water erosion may have brought the impermeable clay layer closer to the surface. Water has difficulty percolating downward through this layer resulting in a perched watertable. In addition, alluvial sediments or organic soils which are by nature poorly drained have accumulated in the low areas.

The intermingling of soil types throughout the land assembly makes the characterization of areas difficult. Instead, the constraints to development created by some of these soils will be discussed in this section and areas where they may occur will be identified.

4.2.1 High Water Table

Areas of permanent and seasonal high water table are found throughout the site but are most concentrated in the northeast. Construction in these areas may require special provisions such as drainage systems or dewatering to control seepage. These conditions also increase frost susceptibility.

While poorly drained soils are not considered suitable for septic tanks (Presant, 1971), engineering solutions may be used to allow this type of waste disposal.

The Briardean and Maple Grove estate residential developments have been proposed in an area which is generally poorly drained. However, most of the site has been found suitable for septic disposal (Dillon, 1985) (Planning Initiatives, 1985). The importation of fill for the construction of leaching beds was suggested in the Development Potential studies wherever poor drainage is a problem.

4.2.2 High Permeability

Loam soils associated with glacial outwash deposits are located mainly in the south. These soils overlay a granular layer and may contain up to 20% gravel. Particularly where these soils are shallow, water percolation is so rapid that attenuation of waste material is not achieved. While providing excellent bearing capacity for construction, the soils will have to be tested prior to development to confirm their suitability for septic tank disposal.

4.2.3 Organic Soils

These soils have an organic matter content greater than 30%, which in the Study Area is present in a partially decomposed state. This material is unstable and remains saturated for most of the year, making it unsuitable for construction and for septic tanks.

The development potential of areas of organic soil depends on the depth of the deposit. Thin layers, between 30.5 - 90.5 centimetres (+/- 12 - +/- 36 inches), can be excavated to expose firm mineral soil and replaced with compacted backfill to create a suitable construction site.

Deposits greater than 90.5 centimetres (+/- 36 inches) deep present major problems for construction and should be avoided, if possible (Presant, 1971).

Organic deposits are common in the eastern portion of the site, but are usually less than 90.5 centimetres (+/- 36 inches) deep. A large deposit in the low area beside the esker in Kitchener is perceived to be a severe constraint to development. Some of the organic material near the intersection of Fountain Street and the Maple Grove Road extension encountered during road construction has been removed. The remainder will be allocated to some open space use.

4.3 AGRICULTURAL LAND CAPABILITY

The Provincial Land Assembly is generally comprised of soil capability Classes 1 and 2, which predominate in the central and western portions of the site; and Classes 3 and 4, often associated with, but not necessarily confined to the lower areas along the drainage channels. Pockets of organic soil are scattered throughout the area, appearing most frequently to the east.

Class 1 soils in this area are deep, well to imperfectly drained and are capable of producing high yields of corn, winter wheat, spring grains and forages. Drainage improvements may be required on some soils for crops like alfalfa and winter wheat which are adversely affected by excess moisture.

Class 2 soils have some limitations which may restrict the choice of crops somewhat or require moderate conservation practices. Where the gravel content is high, natural fertility and moisture-holding capacity may be limited. These conditions are not considered severe and can be managed through the addition of fertilizers, manure and organic material. In other areas, the soil has been given its classification because of poor drainage which can be improved by tiling.

Some soil types in Class 2 are capable of producing good yields of spring grains, corn, forages and commercial vegetable crops if rainfall and fertilization are adequate. Other types favor corn, oats, barley and forage crops.

Class 3 soils found on the Provincial lands have the same limitations of low natural fertility and dryness as the Class 2 soils but these conditions are aggravated by complex slopes of 3 to 6% or single slopes of 6%. These limitations can affect the timing and ease of tillage, planting and harvesting, the choice of crops and conservation methods required.

Under good management, Class 3 soils are fair to high in productivity for a range of crops, particularly grains, but it is recommended that forages be used as rotation crops on sloping fields.

Class 4 soils exhibit severe limitations for agriculture. This may be due to the presence of cobbles or the steepness of the slopes, combined with problems of low natural fertility and poor moisture holding capacity. With careful management, some of these soils can produce good yields of corn and grain crops while others are suitable only for forage.

Some types of Class 4 soils are subject to wetness as well as low fertility. They often occur in undrained forested swamps but where these areas have been cleared they may be used for livestock pasture. Drainage ditches will enable spring grain or hay crops to be grown. Occasionally corn and specialized vegetable crops can be grown on tile drained Class 4 soils.

The organic deposits usually support natural vegetation although it is possible to grow commercial vegetables on these soils.

4.4 AGGREGATE RESOURCES

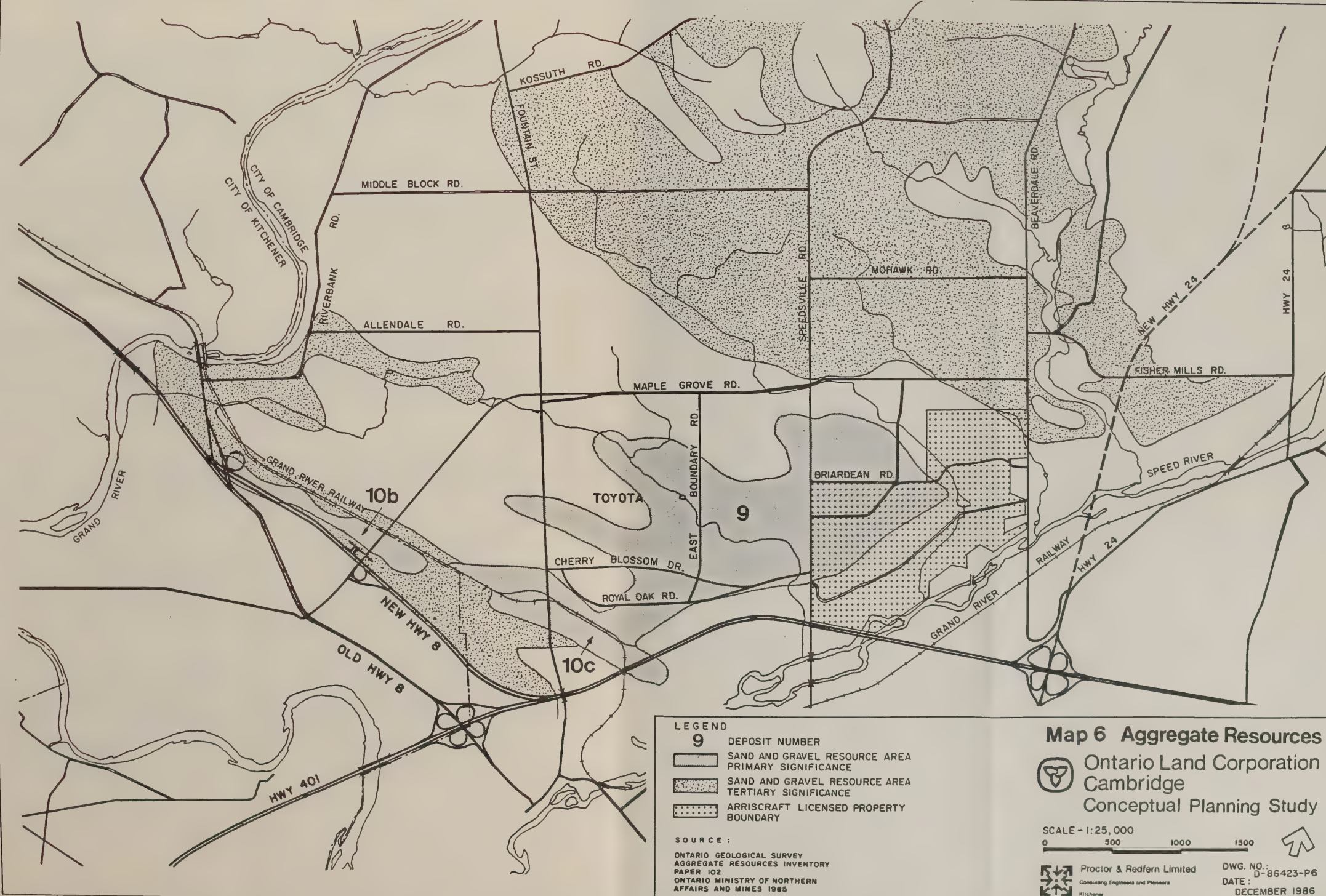
The M.G.S. lands contain two selected sand and gravel resource areas of primary significance; the sand deposit which covers the southeastern portion of the site and the esker in Kitchener. These deposits are ranked ninth and tenth respectively in the aggregate Resources Inventory of the Kitchener-Waterloo-Cambridge area (Ontario Geological Survey, 1985) using qualitative, availability and locational criteria. Aggregate resources are shown on Map 6.

Resource Area 9 is an outwash deposit of coarse to fine sand which is used in the manufacture of decorative brick by the Arriscraft Corporation. The exposed faces of the pits on their property indicate a deposit thickness of 5 to 6 metres (+/- 15 to +/- 20 feet). This sandy material is not of special quality as it contains silts, clays and some gravels (Bousfield, 1986). It must be milled and screened for use by Arriscraft. A stone content of only 5 to 10%, much less than the 35% desired by (Ministry of Natural Resources (M.N.R.)), makes the deposit of no value to commercial aggregate producers. However, well records indicate gravelly sands at greater depth which may warrant further investigation.

Prior to the removal of the Toyota site from the "Mineral Aggregate Resource Area" in the Cambridge Official Plan, 140 hectares (+/- 345 acres) of the deposit were available for extraction. This area could be expected to yield 16 million tonnes of material. Loss of this resource was considered acceptable because Arriscraft's existing resource base was expected to last for at least 15 years and no alternative markets for the material were foreseen in the short term (Bousfield, 1986).

Prior to the development of the remaining lands, utilization of the sand resources must be addressed as part of any detailed planning process.

Two segments of the esker are identified as Resource Areas 10b and 10c in the Aggregate Resources Inventory. Sandy gravels suitable for road base and sub-base occur at a depth of 2 to 3 metres (+/- 6 to +/- 10 feet) in the northern segment, 10b. With screening, this material could be made to comply with Granular "A" specifications (Planning Initiatives, 1983). The southern esker, 10c contains similar material in a thinner layer.



LEGEND

9 DEPOSIT NUMBER

[Pattern: Horizontal lines] SAND AND GRAVEL RESOURCE AREA
PRIMARY SIGNIFICANCE

[Pattern: Stippled] SAND AND GRAVEL RESOURCE AREA
TERTIARY SIGNIFICANCE

[Pattern: Dotted] ARRISRAFT LICENSED PROPERTY
BOUNDARY

SOURCE :

ONTARIO GEOLOGICAL SURVEY
AGGREGATE RESOURCES INVENTORY
PAPER 102
ONTARIO MINISTRY OF NORTHERN
AFFAIRS AND MINES 1985

Map 6 Aggregate Resources

 **Ontario Land Corporation**
Cambridge
Conceptual Planning Study

SCALE - 1:25,000

0 500 1000 1500



 **Proctor & Redfern Limited**
Consulting Engineers and Planners
Kitchener

DWG. NO.: 0-86423-P6
DATE: DECEMBER 1986

The esker resource area is estimated to be 35 hectares (+/- 86 acres), excluding New Highway 8, and is expected to yield 1,224,552 tonnes of aggregate. A portion of the esker has already been removed for the extension of Maple Grove Road and to provide granular material for road construction elsewhere on the site. Further cuts are proposed in this report to enlarge the developable site at the intersection of New Highway 8 and the Maple Grove Extension, as shown on Map 16.

A large area of tertiary significance is found in the northeastern corner of the land assembly. Consisting of generally the same type of sandy material as Resource Area 9, it has probably been given the lower classification on the basis of its location. In addition, extensive areas of high water table may present a significant limitation for extraction.

4.5 VEGETATION

Most of the Provincial Land Assembly has been cleared for agriculture. The vegetated areas which remain are usually associated with poorly drained land, floodplain or steep slopes which are unsuitable for cultivation. Vegetation types range from the valuable stands of deciduous or coniferous trees considered significant by the M.N.R. to moisture loving trees, shrubs and herbaceous plants often found in lowland areas as shown on Map 7 and summarized on Table 1.

The greatest diversity of species occurs on the Kitchener land where the varied topography has given rise to four basic ecological communities; lowland forest, upland deciduous forest, coniferous plantations and old field (Planning Initiatives, 1983).

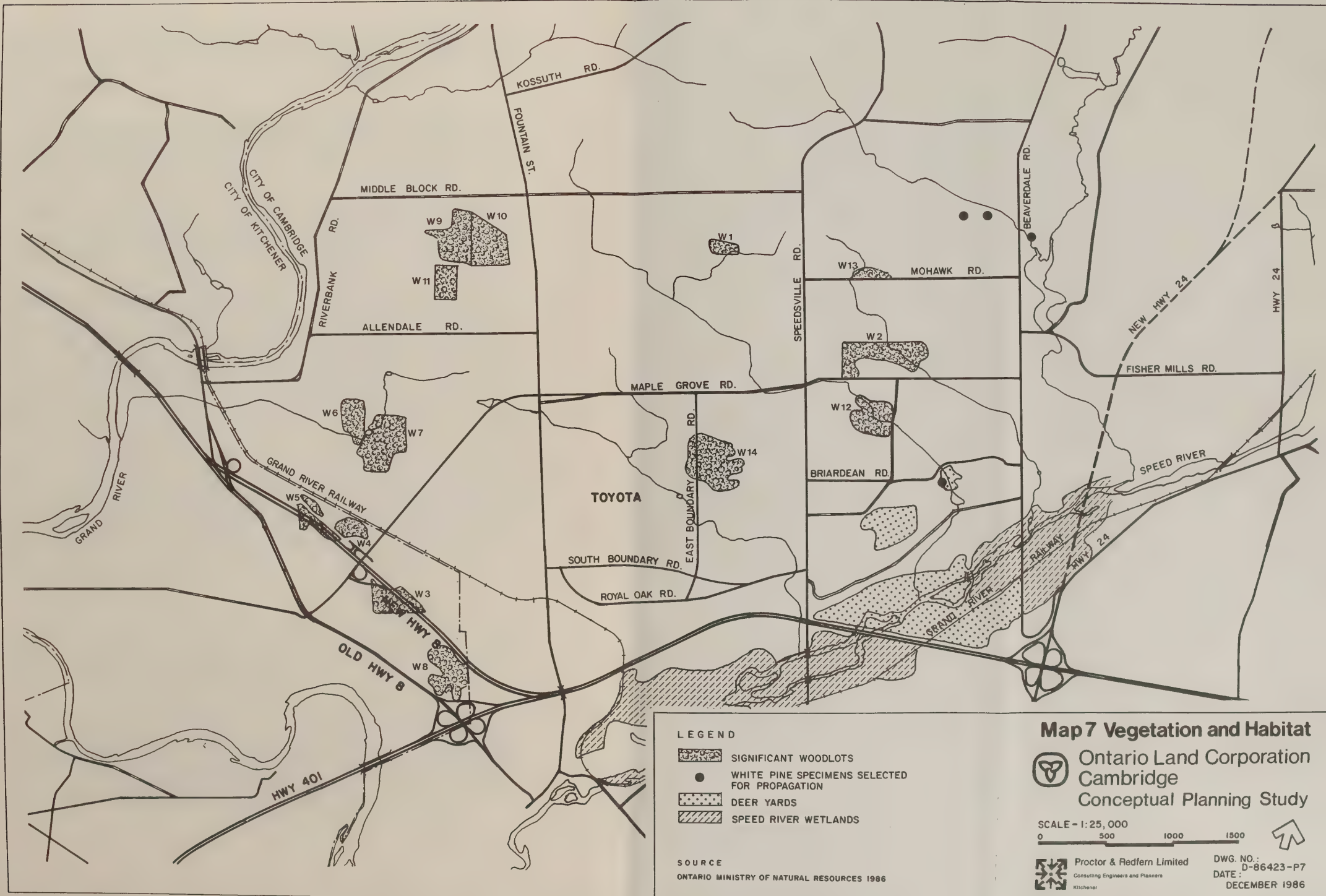
The swampy area to the east of Maple Grove supports a lowland forest community. The depth of the standing water which remains all year determines the mixture of herbaceous plants, shrubs and trees. The most common tree is the Red Maple. Because of its diversity, this forested wetland is considered the most ecologically significant community in the Kitchener land (Planning Initiatives, 1983).

The upland deciduous forest is found along the esker. These woodlots, W3, W4, W5 and W8, are valuable for logging and have been marked for stand improvement by the M.N.R. The dominant species is Sugar Maple, although Beech, White Pine, Red Oak, White Ash and Hickory are also found. The presence of some Carolinian species including Hackberry and Black Walnut adds to the value of this forest, although, it has been severely fragmented by the construction of New Highway 8 and the Maple Grove Extension.

Table 1
Significant Woodlots

Woodlot #	Species Composition	Comments
*W1	Hemlock, Hard Maple Beech	Upland hardwood - good potential
*W2	Silver Maple, White Ash, Basswood, Hard Maple, Black Cherry	Mainly lowland species, - good wildlife cover
*W3	Red Oak, Black Cherry White Ash	Upland species, high value, good site, excellent potential
*W4	Hard Maple, Beech, Red Oak	Upland species, high value, good site, excellent potential
*W5	Red Oak, Black Cherry, Hichory	Upland species, high value, good site, excellent potential
*W6	Hard Maple, Basswood, White Ash, Silver Maple	Fair Upland Woodlot - good potential
*W7	Silver Maple, Hard Maple, White Ash, Beech	Upland and Lowland - medium quality woodlot
*W8	Hard Maple, Beech, White Ash	Excellent Quality - high value, good site, excellent potential
W9	Silver Maple, Hard Maple, Basswood	Lowland species - good quality Silver Maple, good potential for lowland site
W10	Silver Maple	Lowland Silver Maple, poorer quality, small diameters
W11	Hard Maple	Upland maple woodlot - excellent site, excellent quality, good potential
W12	Red Pine, Scots Pine, White Pine	Planted woodlot - fair to good quality, good potential
W13	White Pine, White Spruce	Good quality plantation of White Pine
W14	Silver Maple	Lowland species - good quality for lowland species - good potential

* Woodlots that have been selectively marked for stand improvement.



Several coniferous plantations are scattered throughout the Kitchener land and large areas of old field are found to the west of Maple Grove Road. Neither of these plant communities are considered ecologically significant.

The low river banks which characterize the Grand River Floodplain are lined with willows and open meadows (Proctor & Redfern, 1979). Other tree species which may occur include Manitoba Maple, Sugar Maple, Black Maple and Eastern White Cedar.

The vegetation in the eastern part of the site consists of a number of fragmented coniferous and deciduous woodlots and fence rows. Seven biophysical units have been identified in the area enclosed by Briardean Road and along both sides of Maple Grove Road (Planning Initiatives, 1985).

These include a lowland hardwood area which corresponds to M.N.R. woodlot W2. It is considered of moderately high forestry capability and buffers an intermittent stream from the effects of agricultural activity. A Cedar thicket is located to the north and a Cedar-Hemlock lowland forest to the west. The latter is considered the most ecologically significant vegetation in the Maple Grove area. Willows, Aspens and Eastern White Cedar along the creek banks moderate erosion and provide corridors for wildlife. The creek area east of the proposed Maple Grove estate development has been designated a Protection Forest by the Ministry of Natural Resources.

Stand W12 is a planted woodlot containing several pine species as well as White Spruce. Thinning of this plantation has been recommended by M.N.R. to increase productivity and improve its potential for wildlife habitat. Neither this plantation nor others found in the Maple Grove area are of significant economic value for forestry, however they could provide amenity value to the proposed rural estate developments.

4.6 WILDLIFE

Wildlife studies conducted at selected locations within the Provincial Land Assembly give an indication of the species which may be found throughout the site.

The river valleys provide the most extensive habitat for wildlife. White-tailed deer, woodchuck, swallows, cedar waxwings, great blue herons and other species commonly found on undeveloped lands near urban areas have been observed on the Grand River floodplain. More unusual sightings include red-headed woodpeckers and weasels (Proctor & Redfern, 1979). According to the Canada Land Inventory for wildlife capability, the Grand River Floodplain has poor waterfowl potential.

The Speed River wetlands serve as wintering grounds for white-tailed deer. They occasionally venture along the vegetated corridors which line the eastern drainage courses to visit the interior of the site (Dillon, 1985).

The ecological richness of the Kitchener land is reflected in the diversity of bird species. The Planning Initiatives Development Potential Study lists 41 species as having been observed on August 23, 1983. Mammals which were observed include red squirrel, black squirrel, eastern chipmunk and white-tailed deer.

The Grand and Speed Rivers are recreational fisheries for smallmouth bass. A 1977 M.N.R. report entitled An Investigation of the Fisheries Resources of the Middle Grand River Basin identified 12 other fish species including carp, suckers and sunfish.

Ellis Creek to the east is a limited recreational fishery for Pike.

4.7 CULTURAL RESOURCES

Although archaeological investigations have not been undertaken throughout the study area, the findings of the Archaeological Assessment for the Proposed Toyota Roads Development (1986) indicate that the Provincial Land Assembly has been occupied over a long period in both prehistoric and historic times. This study, conducted by Archaeological Research Associates Ltd. prior to the road construction for Toyota included archival research and field surveys along Maple Grove Road, Fountain Street, East and South Boundary Roads and Royal Oak Road. A large block of land north of Maple Grove Road between Briardean Road and New Highway 24 was also surveyed.

4.7.1 Prehistoric Sites

Prehistoric campsites containing stone tools and waste flakes from tool manufacture were found north of Maple Grove Road, at Fisher Mills and north of Royal Oak Road. These artifacts which are all of Onandaga chert obtained from the Niagara Peninsula are characteristic of the Archaic to the Initial Woodland time period between 4000 B.C. and 1500 A.D.

Isolated finds of Onandaga chert flakes, a biface tool fragment and projectile point were also made along Maple Grove Road.

4.7.2 Historic Sites

Northeast of the intersection of Maple Grove Road and Fountain Street, a concentration of 19th century debris including ceramic, crockery, kaolin pipe fragments and glass indicate the presence of an historical structure.

A log house and early stone house were located east of Fountain Street in the vicinity of the Toyota plant entrance and were removed during the reconstruction of Fountain Street. Ceramic shards and glass fragments dating from the 19th century were found near these structures.

Historic buildings and cemeteries shown on Map 2 - Land Ownership and Cultural Resources summarize the findings of the Archaeological Research Associates Ltd. report. Maple Grove Public School at the corner of Maple Grove Road and Speedsville Road is a stone building dating from the 1850's which is still in use. The Snyder's house, a stone structure with a brick addition south of Fisher Mills Road was built in the early 19th century. Scattered 19th century debris was found in an adjacent field and is thought to be associated with the Snyder's house.

Three historic cemeteries are located within the study area. The Freeport cemetery was established in 1808 at the intersection of Riverbank Drive and Allendale Road. The Hagey Cemetery on the west side of Fountain Street was associated with the Hagey Mennonite Church, established in 1842. The brick building was completely destroyed by fire in 1953.

The Wanner Mennonite Cemetery dates from the founding of the church in 1837. Now rebuilt, the church was the site of the first Mennonite Sunday School in North America, established in 1840 at the Wanner and Bechtel (now Preston) meeting houses.

4.7.3 Heritage Policy

On the basis of the widely scattered and sparse distribution of native artifacts, the Archaeological Assessment concluded that nomadic hunting and gathering groups had occupied the area over a long period. The transient nature of their activities increases the likelihood of similar finds elsewhere in the study area.

Where the potential presence of an archaeological resource has been identified, Policy 13.13 of the Region of Waterloo Official Policies Plan requires that an archaeological study be done as a condition of development approval. Whenever possible, archaeological sites are to be protected from destruction or alteration, otherwise, a reasonable opportunity for salvage must be provided by the developer.

Although no buildings in the Study Area have been designated by the municipality under the **Ontario Heritage Act (R.S.O. 1980)**, Maple Grove School has been identified as having historical and/or architectural significance by the Local Architectural Conservation Advisory Committee of the City of Cambridge and has been listed as a potential building for designation.

Buildings included in the Inventory of Heritage Resources which may be prepared by Council according to Section 2.5.1 of the Cambridge Official Plan at the discretion of Council may be subject to the provisions of Section 2.5.4 for the purpose of preservation and enhancement of heritage resources. Those policies which relate to development of the Provincial land include impact assessment of road improvements and other public works and mitigation of negative impacts and integration of heritage resources into plans of subdivision and other development proposals. Maple Grove School is the only building within the land assembly which has been included in the inventory.

5.0 SERVICING INFRASTRUCTURE

5.0 SERVICING INFRASTRUCTURE

5.1 IMPROVEMENTS REQUIRED FOR TOYOTA MOTOR CORPORATION

A significant portion of the municipal infrastructure required for the servicing of the Provincial Land Assembly has either been built or committed for construction as Phase I facilities under the Province of Ontario agreement with the Regional Municipality of Waterloo.

5.1.1. Water

The water distribution facilities are shown on Map 8 - Water Distribution.

- o 750 mm and 600 mm diameter trunk watermain from River Road in Kitchener along Freeport Road and the Grand River Railway to the Maple Grove Road Extension. A tee has been left at Riverbank Drive to facilitate a future watermain extension on Riverbank Drive/Allendale Road.
- o 600 mm diameter trunk watermain along Maple Grove Road from the Grand River Railway to Fountain Street.
- o 450 mm diameter trunk watermain along Fountain Street from Maple Grove Road to the Kress Hill Pumping Station south of Highway 401.
- o The Kress Hill Pumping Station, new trunk watermain and other system improvements in Cambridge required to deliver adequate quantities of water for the operation of the first stage of the Toyota development.

A detailed discussion of the water system requirement for the Toyota Motor Corporation and the development of the surrounding lands is provided in the report Water Supply Study for the Freeport Area of Cambridge and Adjacent Areas of Kitchener, (Proctor & Redfern Limited, April, 1986).

5.1.2. Sanitary Sewer

The location of existing and proposed sanitary sewers is shown on Map 9 - Sanitary Sewers.

A 750 mm and 675 mm diameter trunk sanitary sewer on Fountain Street from the existing Cambridge sewer system south of Highway 401 to Maple Grove Road was installed in 1986 to service the Toyota plant. Sewage will be treated at the Preston Waste Water Treatment Plant.



5.1.3. Storm Drainage

Storm drainage areas, existing and proposed storm channels, sewers and stormwater retention areas are shown on Map 10 - Storm Drainage.

Phase 1 facilities include:

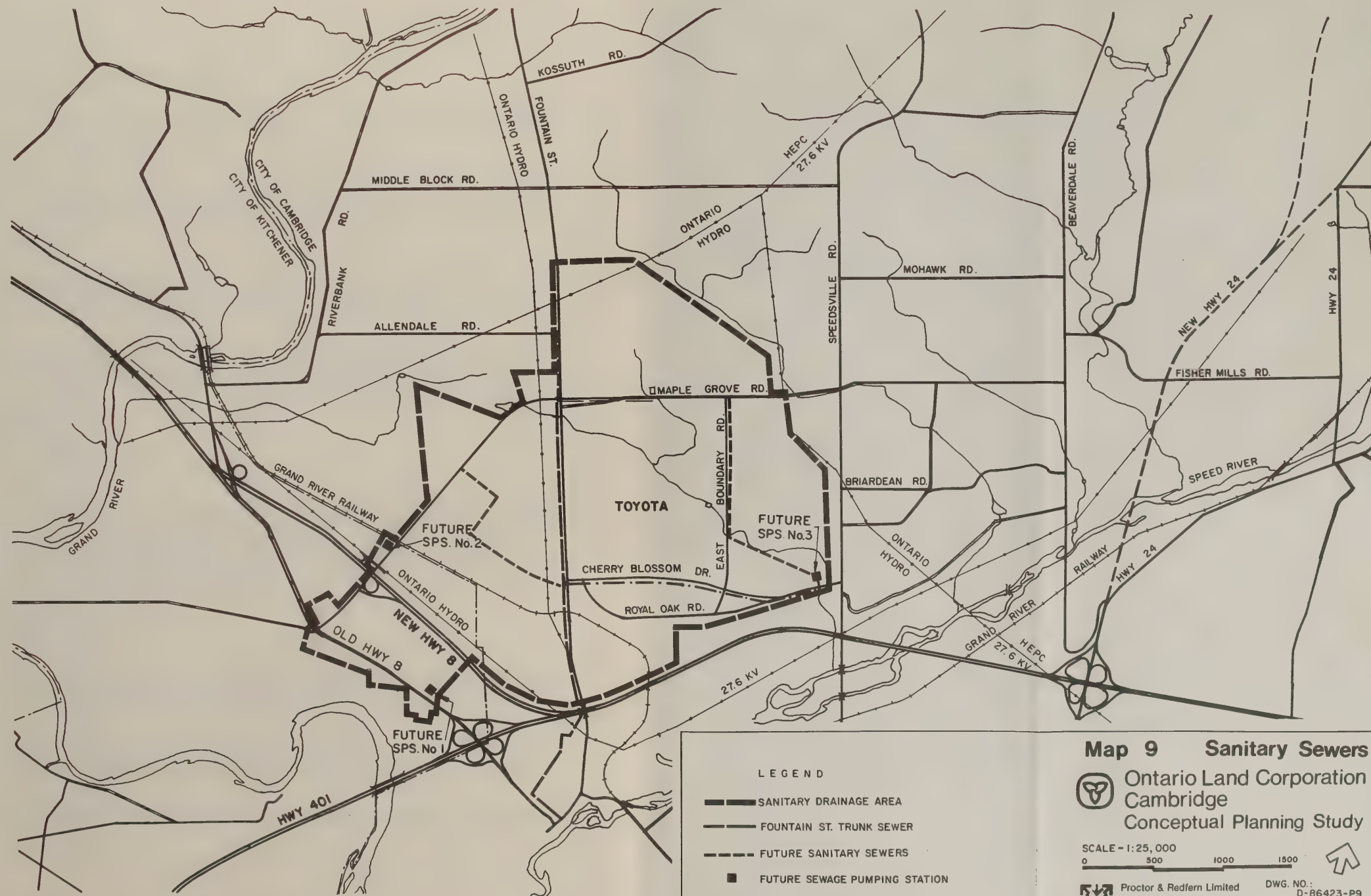
- o Diversion of West Creek around the east side of the Toyota site by construction of a 1650 mm diameter storm sewer on Maple Grove Road and the new East Boundary Road, which has been named Boxwood Drive. This provides drainage for Areas A1, A3, A4 and a portion of A2.
- o The major portion of the increased runoff from the Toyota site Area A2 will be managed in a stormwater detention pond located to the south of the Toyota South Boundary Road, which is now named Cherry Blossom Drive. The outflow from the pond will be limited to the capacity of the existing culvert crossing Highway 401.

Drainage from the site to the pond is conveyed across Cherry Blossom Drive in a 3000 mm x 4600 mm box culvert. The outlet from the pond to Highway 401 has been improved.

- o Storm sewer on Fountain Street is required to drain area D4. This will be built as part of the Fountain Street reconstruction.
- o A storm sewer on and crossing Maple Grove Road to drain areas D2 and D3 will be built as part of Maple Grove Road extension.
- o A storm Sewer on Maple Grove Road has been installed as part of the Maple Grove Road extension to drain Area "C". This sewer extends down Sportsworld Drive and across Old Highway 8 to the Grand River.
- o Storm drainage works are described in more detail in the report, Toyota Development External Storm Drainage System, City of Cambridge, (Dillon, July 1986).

5.2 PHASE 2 IMPROVEMENTS

In order to realize the full potential of the facilities provided in Phase 1, it is necessary to make additional system improvements. The trunk portion of the improvements required for the Phase 2 area of approximately 324 hectares (+/- 800 acres) of industrial land surrounding the Toyota site include:



LEGEND

- SANITARY DRAINAGE AREA
- FOUNTAIN ST. TRUNK SEWER
- FUTURE SANITARY SEWERS
- FUTURE SEWAGE PUMPING STATION
- FUTURE FORCEMAIN

Map 9 Sanitary Sewers
Ontario Land Corporation
Cambridge
Conceptual Planning Study

SCALE - 1:25,000
 0 500 1000 1500

 **Proctor & Redfern Limited**
 Consulting Engineers and Planners
 Kitchener

DWG. NO.: D-86423-P9
 DATE: DECEMBER 1986

5.2.1. Water

- o Two new deep wells together with feeder mains.
- o An elevated water tower to be located in Kitchener on the height of land north of Maple Grove Road near the Grand River Railway.
- o Improvements to the Rahman and Turnbull Water Pumping Stations in Cambridge and watermain improvements in Cambridge and Kitchener to facilitate the supply of water to the new trunk watermains.

Completion of these facilities together with the Phase 1 improvements will provide adequate water transmission and storage facilities for the development for all the lands proposed for industrial uses.

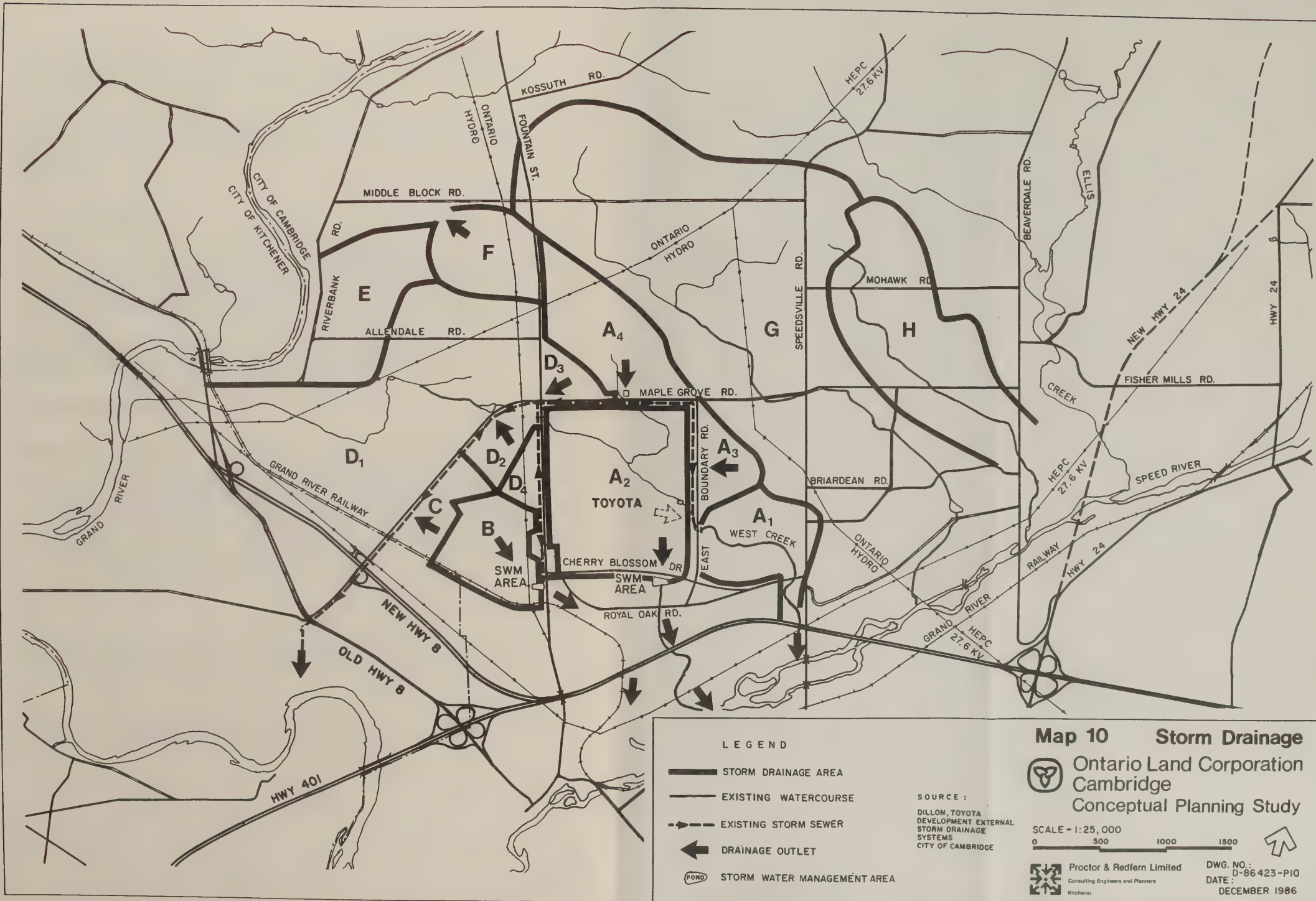
An adequate supply of water will not be available until after additional water supplies have been put on line by the Region of Waterloo. This is scheduled for 1991. Until that time only an area equivalent in size to the area between Fountain Street, Maple Grove Road and the Grand River Railway may be developed.

5.2.2. Sanitary Sewer

Improvements to the outlet for the Fountain Street Trunk sewer are required. These improvements are included as Phase II facilities under the Provincial agreement. They are considered in detail in the report Impact of the Toyota and Q.L.C. Developments on the Riverview Trunk Sewer System, (Proctor & Redfern Limited, December, 1986).

The improvements include:

- o Construction of a relief sewer on Fountain Street between Marmel Court and the siphon crossing of the Speed River to the east of Shantz Hill. Required 1988/89 at a cost of \$310,000.00.
- o Improvements to the Dover Street Sewage Pumping Station to increase the pumping capacity, provide emergency power and upgrade the station. Required 1987/88 at a cost of \$113,000.00.
- o Twinning of the forcemain discharge from the Dover Pumping Station. Required 1988 at a cost of \$240,000.00.



LEGEND

- STORM DRAINAGE AREA
- EXISTING WATERCOURSE
- EXISTING STORM SEWER
- DRAINAGE OUTLET
- STORM WATER MANAGEMENT AREA

SOURCE:
DILLON, TOYOTA
DEVELOPMENT EXTERNAL
STORM DRAINAGE
SYSTEMS
CITY OF CAMBRIDGE

Map 10 Storm Drainage

**Ontario Land Corporation
Cambridge
Conceptual Planning Study**

SCALE - 1:25,000

0 500 1000 1500

Proctor & Redfern Limited
Consulting Engineers and Planners
Kitchener

DWG. NO.: D-86423-PIO
DATE: DECEMBER 1986

- o Expansion(s) to the Preston Sewage Treatment Plant. Timing and cost not established except for a Phase II cost of \$150,000.00 for two primary clarifier covers.

Completion of these improvements will provide a completely adequate sanitary outlet for the servicing and development of all lands within the Fountain Street Trunk Sanitary drainage area boundary shown on Map 9.

5.2.3. Storm Drainage

To accommodate development in Area "B", Map 10, a storm water detention facility will be required to the west of Fountain Street near the Grand River Railway. Without this management facility, major and much more costly improvements to the downstream watercourse will be required.

Completion of these improvements together with those completed in Phase 1 will permit the servicing and development of all lands within areas "A" to "D" inclusive, as shown on Map 10.

5.3 SERVICING CONSTRAINTS

Development of the entire Provincial Land Assembly on full municipal services is subject to a number of servicing constraints. It is important that these constraints be understood relative to the timing of development, the type and density of development and, in fact, whether development of certain portions of the Corporation's lands should be undertaken at all. The implications of traffic considerations have been discussed in the preceding section of this report. The expansion of the water, sanitary sewer and storm drainage infrastructure is now considered.

5.3.1. Water

The ultimate water supply requirements for each of the four alternative planning concepts presented in Chapter 6.0 are summarized in the following tables.

All alternatives require the construction of a trunk watermain on Riverbank Drive, Allendale Road and Fountain Street to connect to the existing watermain at Maple Grove Road.

Alternative Concept 1 requires the extension of a second watermain across the Grand River from the City of Kitchener. For this alternative, the Fairway Road extension will also be required. The watermain would most probably be located on the alignment of the Fairway Road extension. Improvements would be required to the water system in the City of Kitchener to supply water to this trunk. Additional water supplies are required for this alternative.

5.3.2 Sanitary Sewer

The Fountain Street trunk sanitary sewer, constructed in 1986, has adequate capacity to service the industrial and commercial development proposed for the service area designated on Map 9.

Expansion of the Preston Waste Water Treatment Plant will be required to accommodate the full development of the service area. The present plant has an excess of capacity, over existing sewage flows of 1.0 M.I.G.D. When plant expansion will be required is directly dependent upon the growth of sewage flows to the plant. The major portion of the sewage flow increase to the plant over the next few years is expected to come from industrial development north of Highway 401.

Any development to the north of the Fountain Street trunk service area and west of Fountain Street will require:

- o A new trunk sewer along the Grand River with a pumping station to lift the sewage to the Kitchener Waste Water Treatment Plant or,
- o The use of private sewage facilities, i.e. septic tanks.

There has been a detailed study completed by the Regional Municipality of Waterloo for a possible major trunk sewer along the Grand River The Grand River Trunk Sanitary Sewer Functional Report, (Proctor & Redfern, 1979). Little support for this facility is apparent at this time. Decisions have been made by the Cities of Cambridge and Kitchener towards other servicing solutions for much of the area which would have contributed to the trunk. It would appear that this sewer may never be built as envisioned in the 1979 report.

An alternative would be to construct a trunk sewer sized to meet only the requirements of the Corporation. It has been determined that 235 hectares (+/- 581 acres) of residential development with a population of 24,500 together with 20 hectares (+/- 49 acres) of industrial and commercial development, would require a 750 mm diameter sewer. The estimated cost of the sewer, sewage pumping station and forcemain from the limits of the O.L.C. ownership to the Kitchener W.W.T.P. is \$2,460,000.00.

Pumping Station No. 3 is required to service the lands to the south and east of the Toyota site. We estimate the cost of this station to be \$400,000.00.

5.3.3 Storm Drainage

Adequate provisions for the management and outlet of stormwater for the development suggested on the O.L.C. lands are included in the Phase I and II facilities already discussed, except as follows:

- o For the area north of Maple Grove Road and east of Fountain Street a water detention facility(s) will be required to control runoff to predevelopment levels.
- o For the area east of the Toyota site water management will be required to limit stormwater flows to the present capacity of West Creek and the West Creek crossing of Highway 401.
- o In the area north of Maple Grove Road and west of Fountain Street, storm water from the Maple Grove Road extension discharges uncontrolled into the existing watercourse through Area "D", providing a degree of natural stormwater detention. Development within Area "D" will require formalization of this management area and improvements to the existing watercourse which outlets across the Grand River Railway, Freeport Road and Highway 8 to the Grand River.

The cost of these water management improvements has not been estimated. They should be considered to be a normal requirement and cost of urban development with the Region of Waterloo.

6.0 PLANNING CONCEPTS

6.0 PLANNING CONCEPTS

6.1 CONCEPT PLAN DEVELOPMENT

The process of developing a land use plan for the Provincial Land Assembly involved formulation of an overall concept and generation of alternatives representing five different development scenarios. The comparative distribution of land uses is summarized on Table 2.

The overall concept defines the following elements which are common to all the alternatives:

- a) **Land uses** - Potential land uses are generally restricted to Industrial, Business Park, Open Space, Recreation, Estate Residential and Agriculture.
- b) **Land Use Arrangements** - The application of general guidelines pertaining to each use has resulted in consistency in the locational distribution of land uses. The alternatives depict variations in the density and location of activities ranging from a maximum development scenario (Alternative 1) to a minimum development scenario (Alternative 3).

This section lists the general guidelines which apply to each land use. The unique aspects of each alternative will be described in the following section.

6.1.1. Industrial

The location of the Toyota plant has been the major impetus for the development of the Provincial Land Assembly. The City of Cambridge envisions Toyota as the hub of a thriving industrial park and has designated the area north of Highway 401 a Principal Employment Area in the Official Plan.

The industrial district has therefore been centered around the Toyota plant. This will ensure that potential land use conflicts do not occur adjacent to the plant site.

Servicing for Toyota will largely determine the form that development takes. The areas most easily serviced by the Fountain Street Trunk and those along major access roads will be the most attractive for industry. The capacity of the Fountain Street Trunk and the feasibility of pumping areas not serviceable by gravity limit the extent of the industrial area.

Table 2
Land Use Areas For Alternative Concepts

Land Use	Alternative 1		Alternative 2		Alternative 3		Alternative 4		Revised Concept	
	Hectares	+/-Acres	Hectares	+/-Acres	Hectares	+/-Acres	Hectares	+/-Acres	Hectares	+/-Acres
Agriculture	322	796	584	1443	569	1407	479	1183	463	1144
Open Space	367	907	367	907	374	924	358	885	358	885
Industrial	596	1473	544	1344	468	1156	602	1488	602	1488
Business Park	16	40	16	40	16	40	16	40	16	40
Estate Residential	124	306	154	381	238	588	210	519	226	558
Urban Residential	236	583	0	0	0	0	0	0	0	0
Community Facilities	4	10	0	0	0	0	0	0	0	0
Existing Residential	103	255	103	255	103	255	103	255	103	255
Total	1768	4370	1768	4370	1768	4370	1768	4370	1768	4370

Maple Grove Road and Fountain Street will become the main arterial roads serving the industrial district. Access to these roads will be limited by the creation of an internal road system for the area west of Fountain Street known as Area "A". A service road linking the Toyota entrance on Fountain Street directly with Maple Grove Road has been recommended to reduce traffic and left turn movement at the Maple Grove/Fountain Street intersection. Royal Oak Road will be extended to connect with Maple Grove Road further to the south.

A river crossing at Fairway Road will eventually be required to handle commuter traffic between Kitchener and the industrial area. Fountain Street was chosen as the most direct link between the Fairway Road Extension and the Toyota entrance.

The Fairway/Fountain Street alignment can be connected directly to Kossuth Road (Regional Road 31) to create an alternative route to Guelph. This will decrease traffic on Highway 7 and reduce the need for a Breslau By-pass.

The exposure and easy access provided by the Maple Grove Road extension favors the location of high quality industry and office use along the north side. Regional policy will probably prohibit front lotting because of plans for future road widening. Sewage will have to be pumped from this area to the Fountain Street Trunk.

Development north of the Maple Grove Road extension will create a need for watercourse improvements. Stormwater from this area, the road itself and from the northern section of the industrial area south of the Maple Grove Road extension will be directed to the lowland to the north which drains into the Grand River.

All land designated Industrial in the Cambridge Official Plan is allocated to this use in the land use alternatives.

The area west of Fountain Street opposite Toyota has been included in the Phase 1 Development Area, and will be developed first. The northernmost section will have to be designated and re-zoned for industrial use.

6.1.2 Business Park

The proposed business parks are intended to function as service centres for the industrial district. Possible uses permitted in the Kitchener Business Park Service Centre Zone include offices, service commercial, hotels and restaurants. A similar range of uses is permitted within the Cambridge Industrial Zone. The activities are located at major intersections for ease of access and to provide distinctive entry points into the industrial district.

6.1.3. Residential

Existing residences are to be maintained on private services.

The overall concept recognizes an estate residential district which will be created by the 139 lot development proposed for the Arriscraft property and the existing residences along Beavertdale Road and at Fisher Mills.

The Briardean proposal has been retained and rural estate development has been suggested for the remainder of the eastern portion of the Study Area. A rural estate district of this size may have to be considered a long-term option given the considerable amount of estate land available elsewhere in the Region.

The topography and vegetation found in the eastern portion of the Study Area provide visual amenities which will enhance residential development. If the underlying sand resource is extracted prior to development, opportunities for the creation of attractive landscapes through rehabilitation will become available.

A corresponding lack of visual amenities limits the potential for estate residential use in the west. New development has therefore been confined to the limited expansion of the existing Freeport and Banat Road communities.

6.1.4 Open Space

The overall concept respects the Open Space designations in the Cambridge Official Plan. These generally follow the tributaries of the Grand and Speed Rivers providing protection for watercourses, wetlands and wildlife corridors. Land which is not developable due to steep slopes, high water table and organic soils is also covered by this designation. The Open Space allocation also includes the existing cemeteries.

The Open Space designation north of the Maple Grove Road extension has been enlarged to provide retention for stormwater generated by industrial development on both sides of this arterial.

This area can also serve as a buffer between the industrial use and farm use or estate residential development to the north.

Protection of woodlots considered valuable by the M.N.R. is achieved through the adherence to the Cambridge Open Space designations, the enlargement of the designation north of the Maple Grove Extension and the creation of an additional Open Space area north of Allendale Road.

6.1.5. Agriculture

Policies restricting development in Regional Settlement Policy Area "E" have been adhered to with the exception of an industrial allocation north of Maple Grove Road and east of Fountain Street. Ease of servicing creates an incentive to propose development in this area in two of the alternatives. Otherwise Area "E" is to remain in Agriculture and Open Space.

The location of the drainage area boundary for the Fountain Street Trunk makes servicing very difficult in the eastern part of Area "E". Areas of organic soils and high water table associated with the natural drainage system severely restrict the buildable area.

6.2 ALTERNATIVE DEVELOPMENT CONCEPTS

6.2.1 Alternative 1 - Full Urban Community

Alternative Concept 1 is shown on Map 11.









a) Industrial

Alternative 1 maximizes the potential for intensive urban/industrial development within Regional Settlement Policy Area "A".

Full use has been made of the Maple Grove Road extension frontage on the north side with only a small open space gap left as an outfall for stormwater from the south.



LEGEND

-  AGRICULTURE
-  OPEN SPACE
-  INDUSTRIAL
-  BUSINESS PARK
-  EXISTING RESIDENTIAL
-  ESTATE RESIDENTIAL
-  URBAN RESIDENTIAL
-  COMMUNITY FACILITIES

Map 11 Alternative Concept 1 Ontario Land Corporation Cambridge Conceptual Planning Study

SCALE - 1:25,000

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Consulting Engineers and Planners
Kitchener

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DATE:
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The industrial use extends westward from the Maple Grove Road extension along the Grand River Railway. Access will have to be provided across the railway to Freeport Road in order to avoid directing industrial traffic through the Freeport residential neighbourhood.

The area east of Toyota has been allocated to industrial use in Alternative 1 with the existing hydro line forming the northeastern boundary. Access is obtained from Boxwood Drive. Although the Open Space designation along the watercourse fragments the industrial area somewhat, there may be a potential to reduce its extent through channelization. Since pumping will be required to service the area, its development potential will be determined by the expected returns from land sales relative to servicing costs.

Industrial development has been proposed north of Maple Grove Road and east of Fountain Street in this alternative. Its extent is limited by the drainage area boundary to the northeast and by the Schwebco Property fronting on Maple Grove Road to the east.

b) Residential

The most noteworthy feature of Alternative 1 is the serviced residential community north and south of Allendale Road. This retains some of the elements of the 1976 Freeport Community Plan including a north-south collector linking the Fairway Road Extension with Maple Grove Road and the provision of community and shopping facilities in association with a community park.

While urban residential development represents the most efficient use of serviceable land, two factors limit the realization of this scenario.

- Servicing of the area involves a reconsideration of the Grand River Trunk Sanitary Sewer, if only in a scaled down form.
- Feasibility of major service construction will depend entirely on economic viability.

6.2.2. Alternative 2 - Minimum Development North of Maple Grove Road

Alternative Concept 2 is shown on Map 12.

This alternative duplicates Alternative 1 in its industrial allocation except that no development is proposed for Policy Area "E".



LEGEND

-  AGRICULTURE
-  OPEN SPACE
-  INDUSTRIAL
-  BUSINESS PARK
-  EXISTING RESIDENTIAL
-  ESTATE RESIDENTIAL

Map 12 Alternative Concept 2



Ontario Land Corporation
Cambridge
Conceptual Planning Study

SCALE - 1:25,000

0 500 1000 1500



Proctor & Redfern Limited
Consulting Engineers and Planners
Kitchener

DWG. NO.:
D-86423-PI2
DATE:
DECEMBER 1986

Estate residential development west of Fountain Street is restricted to the expansion of the existing Freeport and Banat Road communities. Otherwise, the entire northern portion of the land assembly is to remain in agriculture.

Alternative 2 maximizes development potential in the south but retains the highest proportion of land in agriculture in the north.

6.2.3. Alternative 3 - Estate Residential East of Toyota/Minimum Industrial Development

Alternative 3 which is shown on Map 13, represents the minimum development scenario. The area east of Toyota has been allocated to Estate Residential rather than Industrial in recognition of the higher servicing costs, the steep topography and the Open Space designation along the watercourse.

This will allow the Boxwood Drive woodlot, which is considered valuable by M.N.R., to be preserved as Open Space. However, residential land opposite the Toyota plant is not the most compatible land use.

The Banat Road community has been extended south of Allendale Road in this alternative. This reduces the area left in agriculture slightly in comparison with Alternative 2.

Estate residential development is maximized in Alternative 3. Whether sufficient market demand exists to absorb this amount of residential land is a major question associated with this alternative.

6.2.4. Alternative 4 - Intensive Industrial Development

This alternative maximizes industrial development potential by including lands in Policy Area "E", north of Maple Grove Road. Development is proposed for all the lands within the Fountain Street sanitary trunk drainage area; using the existing watercourse as a natural boundary to the east. The proposal maximizes industrial frontage and potential access to the two major internal arterial roads - Fountain Street and Maple Grove Road. Reflecting the highest acreage in industrial use, Concept 4 also has the lowest area retained for agriculture.



LEGEND

-  AGRICULTURE
-  OPEN SPACE
-  INDUSTRIAL
-  BUSINESS PARK
-  EXISTING RESIDENTIAL
-  ESTATE RESIDENTIAL

Map13 Alternative Concept 3



Ontario Land Corporation
Cambridge
Conceptual Planning Study

SCALE - 1:25,000

0 500 1000 1500



Proctor & Redfern Limited
Consulting Engineers and Planners
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DWG. NO.:
D-86423-P13
DATE:
DECEMBER 1986

The proposed northern most extension of the industrial area in Policy Area "E" falls into a different drainage area than the more southerly lands. This situation will likely necessitate connection to, and possibly upgrading the size of, proposed sanitary trunk mains intended to serve developable lands south of the Ontario Hydro line. A forcemain would likely be required. Development of this area, depends, therefore, upon the economic viability of constructing the additional major services to the area.

Offsetting the additional industrial development in Policy Area "E", the intensity of industrial development in Policy Area "A", north of Maple Grove Road, was reduced to a small cell south of the major east-west Open Space area. Extension of the industrial area along the Grand Trunk Railway, as shown on the Concepts 1-3, has been identified on Concept 4 as estate residential to take advantage of the area's proximity to Highway 8 and the Kitchener/Cambridge Urban Corridor. Consequently the acreage devoted to this use ranks second to that identified on Concept 3.

6.2.5 Revised Concept

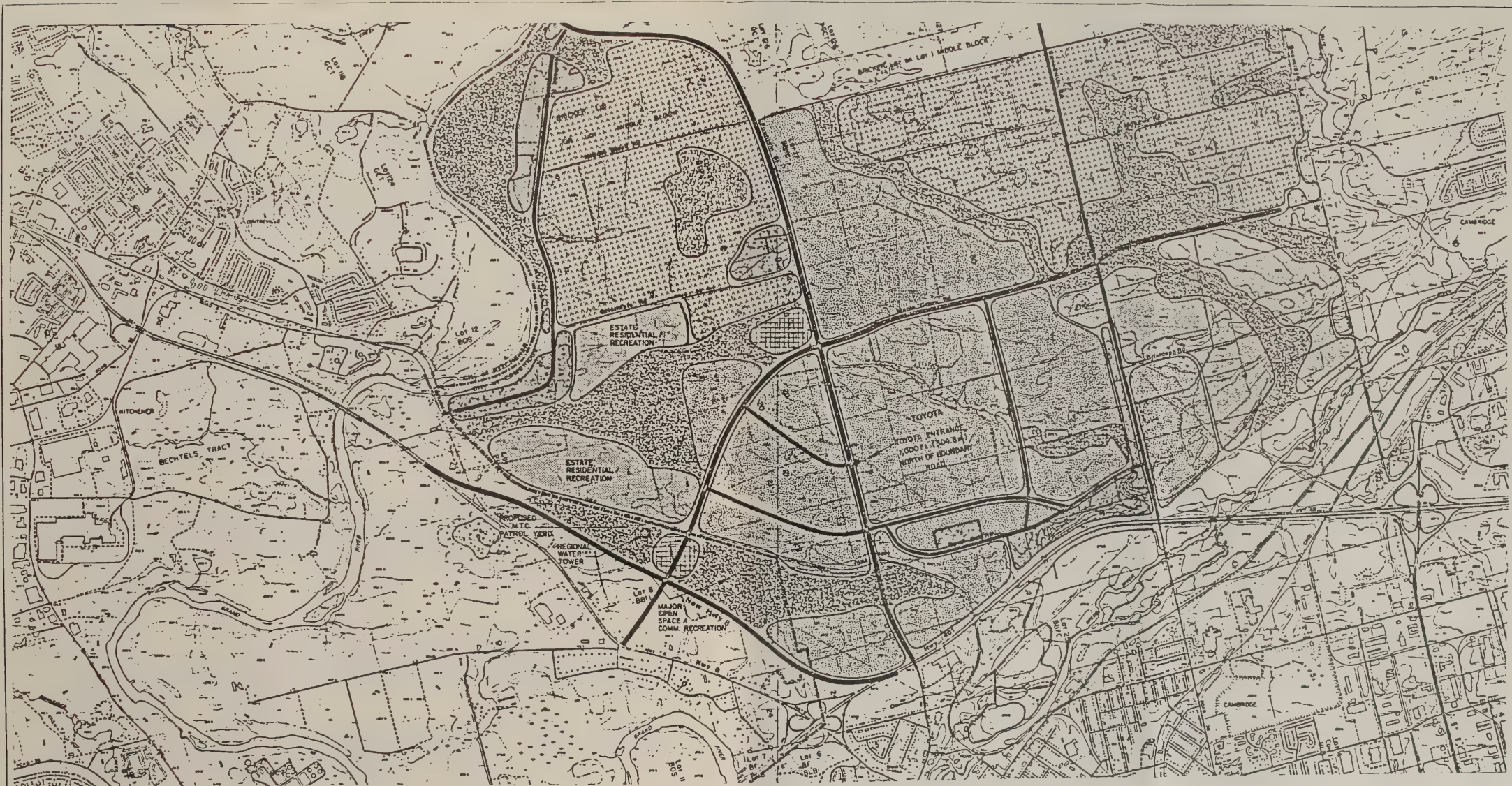
The Revised Concept, represented on Map 15, was generated in consultation with Regional planning staff and based upon review and assessment of the initial four alternative land use concepts.

The distinctive feature of this Revised Concept is retention of the estate residential/recreational land use shown in Concept 4 in place of industrial development along the Grand River Railway. This use extends the entire length of Allendale Road. These two parcels, in association with an expanded Open Space allocation, could form an estate residential/golf course complex.

Residential/recreational development along the railway will be more compatible with the existing Freeport community than the industrial use proposed in the other alternatives and access can be obtained from Riverbank Drive.

Other major features include industrial development in Policy Area "E", although the potential servicing problems to the north are recognized by preserving the area for agricultural activities. The existing drainage course forms the eastern boundary to the area.

In addition to the estate residential along the Grand Trunk Railway the area previously identified south of Allendale Road has also been extended east to Fountain Street. Agricultural lands in Policy Area "A" are now concentrated north of Allendale Road within clearly defined boundary roads.



LEGEND

-  AGRICULTURE
-  OPEN SPACE
-  INDUSTRIAL
-  BUSINESS PARK
-  EXISTING RESIDENTIAL
-  ESTATE RESIDENTIAL

Map 14 Alternative Concept 4



Ontario Land Corporation
Cambridge
Conceptual Planning Study

SCALE - 1" = 25,000'

0 500 1000 1500



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Consulting Engineers and Planners
Richmond

DWG. NO.: D-86423-P14
DATE: APRIL 1988

6.3 KITCHENER PROPOSAL

The land use allocations proposed for the M.G.S. and M.T.C. land within the City of Kitchener are discussed in a separate section in this chapter for the following reasons:

- a) The Terms of Reference require that this study provide a basis for the resolution of the deferral of the Open Space designation in Amendment No. 27 to the Kitchener Official Plan (Pioneer Tower East); and
- b) The land use arrangement proposed for this area is common to all four alternatives and as such can be considered part of the overall concept.

The constraints to development will be presented first as a rationale for the choice and extent of land uses. The land use concept will then be described and potential uses for each use category will be suggested in accordance with the City of Kitchener Industrial and Open Space By-law.

6.3.1. Constraints to Development

The exposure and easy access provided by New Highway 8 and the Maple Grove Road Extension initially suggested an industrial use for the Kitchener land. However many natural and man-made constraints combine to severely restrict the usable area, limiting its potential for this type of development.

a) The Esker

The esker is a unique geological feature which runs in an east-west direction just south of the municipal boundary. Its steep slopes create a hazard for any type of built development and barriers to access to the rest of the land assembly.

Although it has been fragmented by the cuts for New Highway 8 and the Maple Grove Road extension the esker is a regional Area of Natural and Scientific Interest.

The site requirements for the Regional Water Tower to be located west of Maple Grove Road will necessitate preservation of a significant portion of the esker. These requirements are: a base elevation of 325 m for the water tower, stable sides slopes and suitable grades for an access road. As a result, the large continuous area which is usually required for industrial lots will not be available.

The proposed water tower is an essential service for the industrial area and surrounding lands and is dependent on elevation available on the proposed site. Extraction of the remaining aggregate resource is, therefore, not recommended and does not contravene the extraction policies of the O.P.

b) Soils

An extensive deposit of organic soil is found in the low area east of the Maple Grove Road extension. These soils are unsuitable for building and their removal and replacement could be very costly depending on their depth which, at present, is unknown.

c) Access

The convergence of the interchange at New Highway 8/Freeport Road and the Grand River Railway restricts the land area and prevents the construction of an access road from Maple Grove Road to Freeport Road capable of servicing industrial activities. This situation is aggravated by the 27.6 kv hydro line and 20 m right of way which parallels the highway.

d) M.T.C. Patrol Yard

M.T.C. wishes to develop a Patrol Yard on a site north of the Regional Water Tower. The designated site will likely include a significant portion of the buildable area within the Kitchener land. However, due to the area's topography and the design requirements for both the Patrol Yard and Water Tower, a precise area which could be available for other activities cannot be established at this time. The principal factors include:

- i) Proper siting of the Water Tower. This is particularly important since maximum effectiveness of the facility is dependent upon it being constructed at a specified elevation. This location will, in turn, dictate the location of the site access road in order to meet required grades;
- ii) The future access ramps for the Maple Grove Road/New Highway 8 interchange will dictate the start point for the access road to the Patrol Yard site. In concert with the Water Tower access road grades, grade requirements for the Patrol Yard access road will determine the right-of-way necessary to accommodate its construction, and, consequently the land remaining between the Water Tower site and Maple Grove Road for other development; and

- iii) The size of the M.T.C. Patrol Yard necessary to serve the area is still under study. Once the required area has been established to ensure sufficient area is available to locate the necessary buildings the surplus lands between the Patrol Yard and Freeport Road can be more precisely identified. These lands will accommodate both the necessary access, which must be parallel and adjacent to the Grand River Railway, and other activities.

e) Land Use Concept

Due to the constraints described above, industrial development has been confined to the area along Maple Grove Road and the southeasterly corner along Highway 8. The remainder of the Kitchener land is to be designated Open Space.

f) Business Park

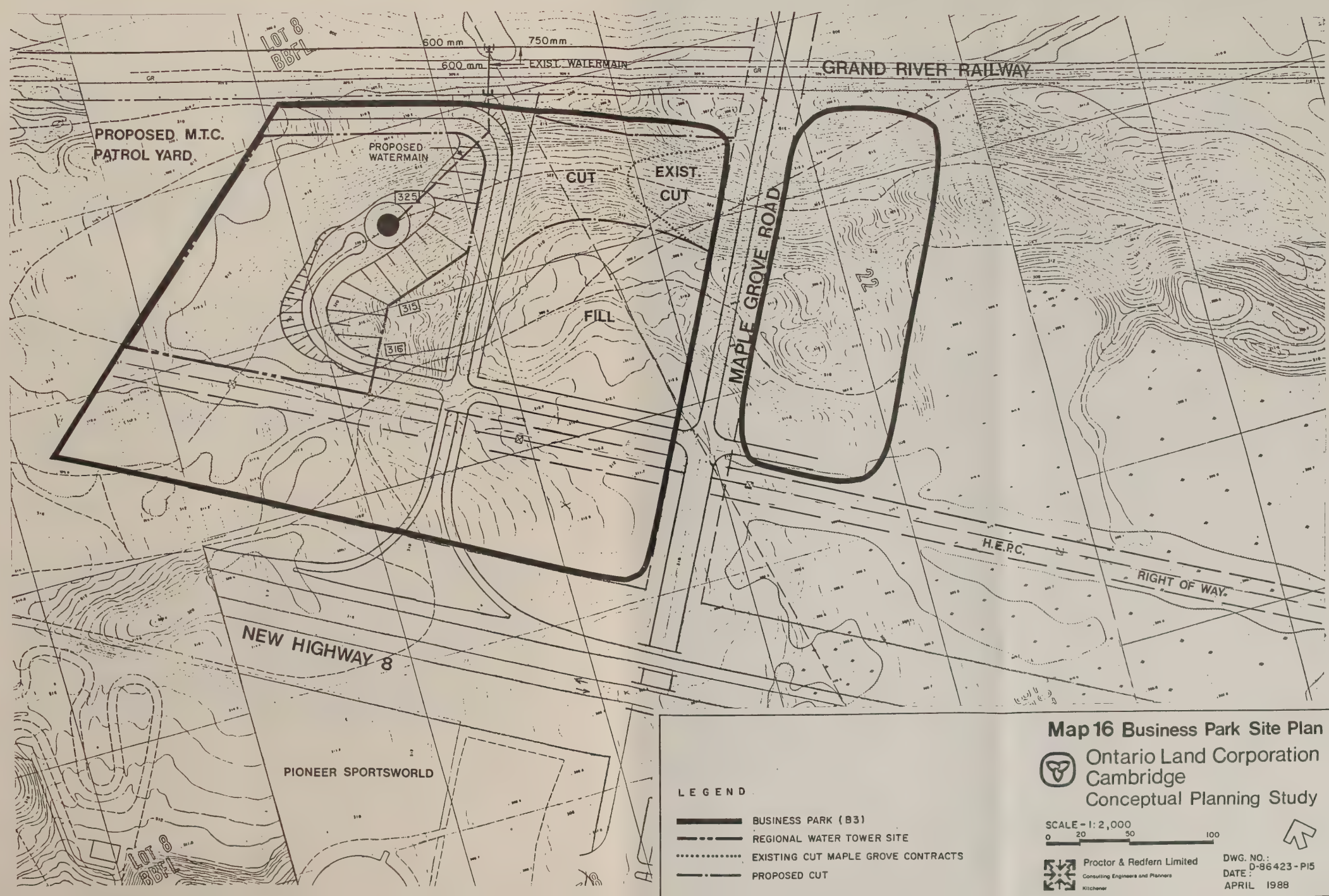
As shown on Map 16, a Business Park Service Centre (B-3) has been proposed on both sides of Maple Grove at New Highway 8, including the M.T.C. and Regional Water Tower sites. This complies with Amendment No. 65 to the Kitchener Official Plan which requires that service centers be located at intersections of primary roads adjacent to industrial and business park areas.

Permitted uses include a full range of service commercial enterprises and administrative offices. A complete list of permitted and prohibited uses in a B-3 Zone is provided in Section 25 of the Industrial and Open Space By-law which is included in Appendix "C" of this report. The proposed Water Tower facility and activities at the M.T.C. Patrol Yard have been included in the proposed Business Park as compatible public service/utility activities.





The high profile location and proximity to visitor or tourist attractions favors construction of hotel exhibition and related facilities in this Business Park Service Centre.

While cutting and filling will be required in the western section of the proposed Business Park and extensive grading must be done throughout the site, the location and intensity of the proposed use will justify the site preparation costs.

To take full advantage of the site's exposure and excellent access potential to Highway 401 part of this area may also be suitable for a conference or convention facility. However, to provide the opportunity for this type of activity, the City of Kitchener's Commercial Open Space Zone (P-5) (Section 30-Industrial and Open Space By-law) would be more appropriate in place of the B-3 designation. The permitted uses of the P-5 zone are also included in Appendix "C".



LEGEND

-  BUSINESS PARK (B31)
-  REGIONAL WATER TOWER SITE
-  EXISTING CUT MAPLE GROVE CONTRACTS
-  PROPOSED CUT

Map 16 Business Park Site Plan

 Ontario Land Corporation
Cambridge
Conceptual Planning Study

SCALE - 1:2,000

0 20 50 100

 Proctor & Redfern Limited
Consulting Engineers and Planners
Kitchener

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DATE: D-86423-PI5
APRIL 1988

g) Industrial

The southeastern corner of the Kitchener land can be developed in conjunction with the Corridor Industrial area in Cambridge, with internal roads and sewers being extended across the municipal boundary.

The implementing zoning in Kitchener, Business Park (B1) is compatible with the intent of the Corridor Industrial in the Cambridge By-law which permits uses that will enhance the edges and entrances to the City and which will benefit from the prominent location.

h) Open Space

While not considered suitable for conventional urban development, the proposed Open Space area in Kitchener presents opportunities for recreational use which can supplement the service function of the Business Park. The interesting topography and vegetation of the esker provide an ideal setting for recreation and educational activities.

The previously described Commercial Open Space Zone (P-5) provides the flexibility required for the development of this area. The permitted uses include hotels, restaurants, campgrounds and other commercial facilities.

i) Conclusions

The land use arrangement proposed for the Kitchener lands is intended to make use of the opportunities presented by the prominent location while recognizing the many constraints which limit development potential. The realization of the proposed concept will require a revision to the Open Space designation in Amendment 27 to permit the establishment of the Business Park Service Centre (B-3) at the New Highway 8/Maple Grove intersection. However, the total amount of Open Space will be significantly increased. A Commercial Open Space Zoning (P-5) is recommended for the remainder of the Kitchener land and possibly portions of the proposed Business Park if a convention facility is to be attracted to the area. The Industrial designation presently in place need be retained only for the southeastern parcel associated with the Cambridge corridor industrial development.

7.0 SUMMARY OF MARKET POTENTIAL

7.0 SUMMARY OF MARKET POTENTIAL

7.1 INTRODUCTION

Following the selection of the Revised Concept - Map 15, Hemson Consulting Ltd. was retained by M.G.S. to assess the market for the proposed land uses. This chapter summarizes the findings of the marketing study, entitled Market Potential for the Cambridge Concept Plan, (May, 1987).

These findings were largely based on historic land absorption rates in the Region of Waterloo, which together with an analysis of current market trends were used to develop a ten year forecast of the total Regional demand. The competitive position of the M.G.S. land was then assessed to determine the market share which this land could be expected to attract.

7.2 INDUSTRIAL

The Revised Concept allocates 602 hectares (+/- 1,483 acres) to industrial uses. The marketing study presented an optimistic outlook for the development of these lands. This is due in part to industrial growth within the Region which is expected to continue at a rate of 2.5% per annum over the next ten years and to the physical and marketing advantages which give the M.G.S. land the potential to become the "premier industrial park" in the Region. These advantages include a scale large enough to provide an identifiable image and permit the creation of large lots, a location central to the Region and easily accessible to Highway 401, a variety of access points including a highly visible "gateway" entrance at New Highway 8, suitable topography and a high profile tenant, Toyota.

Furthermore, comparable alternative sites are limited in supply with only the Huron Business Park in Kitchener offering serious competition. Huron, however, currently lacks the direct route to Highway 401 and the "gateway" entrance that make the M.G.S. land so attractive. Consequently, the M.G.S. land can be expected to capture over one third of the Regional market for industrial land. With a Regional industrial absorption rate forecast of 65 - 75 hectares (+/- 161 to +/- 185 acres) per year, based on a 2.5% economic growth rate, this would amount to 24 hectares (+/- 59 acres) annually, or 240 hectares (+/- 593 acres) over the next ten years.

The report cautions, however, that substantial annual fluctuations in absorption are to be expected given the uncertainty of economic predictions, especially where the automotive sector is concerned. This industry may be facing an oversupply situation as high as 40%. An absorption rate of 20 - 30 hectares (+/- 49 to +/- 74 acres) per annum, corresponding to Regional economic growth rates of 2.0% and 3.0% is, therefore, suggested as a realistic range.

Within Cambridge itself, the market for industrial land is estimated at 293 hectares (+/- 724 acres) over the next ten years. This could almost exhaust both the existing supply of 125 hectares (+/- 309 acres) of park quality serviced and easily serviced industrial land and the 160 hectares (+/- 394 acres) within the Study Area currently designated "Industrial" in the Cambridge Official Plan.

Additional industrial designations within the Study Area are, therefore, warranted on the basis of Regional market demand. Given the comparative advantages of the M.G.S. land, demand in this area is expected to precede the depletion of the existing supply. The study suggests that because of the comparative advantages of the M.G.S. lands they will be able to attract 50% of the total Cambridge market. This will create a need for further industrial designations for a ten year supply time frame.

7.3 ESTATE RESIDENTIAL

The 226 hectares (+/- 558 acres) proposed for estate residential use in the preferred concept is sufficient to accommodate over 550 units on 0.4 hectare (+/- 1.0 acre) lots which would typically be serviced by septic tanks and piped water.

The marketing study indicates that a large supply of such lots currently exists within the Region including 786 lots already severed or within a registered plan of subdivision and 4,092 lots designated in Municipal official plans. Sales rates appear to be largely fueled by speculative pressure. Actual construction amounted to only 57 units per year, although sales activity in estate residential lots has been strong.

The lack of distinguishing physical features and convenient community services puts the M.G.S. land at a disadvantage in this highly competitive market. In addition, adjacent industrial uses and the accompanying traffic will detract from the tranquil rural atmosphere sought by prospective estate home buyers.

The lands south of Allendale Road and west of Beaverdale Road are considered the most suitable within the study area for this type of development, having some open space buffering from the industrial areas.

The study concludes that there is an oversupply of rural estate lots and a very limited market for this land use at the current time.

7.4 BUSINESS PARK

The marketing study supports the designation of approximately 16 hectares (+/- 40 acres) within the Revised Concept as Business Park. While demand for the uses permitted under this designation is difficult to predict, there appears to be a long term potential for commercial services such as banks, restaurants and convenience retail to serve the workers at the nearby industrial plants. No existing commercial developments are located adjacent to the Industrial Area.

While some potential is also seen for a hotel/motel development in the long term, office uses are not considered viable given the small size and nature of the market. The major uses of competitive office space, the insurance industry and government would not favour this location and industries traditionally prefer to locate their office at the plant site.

7.5 CONCLUSIONS

The marketing study indicates that there appears to be excellent potential for industrial development of the M.G.S. land. Because of its physical and marketing advantages and the lack of comparable alternative sites, the M.G.S. lands could become the "Premier Industrial Park" in the Region. The market for these lands is estimated at 24 hectares (+/- 59 acres) per year over the next ten years, approximately one-third of the total Regional market.

Further industrial designations within the Study Area are, therefore, warranted on the basis of market demand.

While it is difficult to predict the sales potential for the suggested Business Park uses, the long-term potential supports this designation. Little current demand, however, appears to exist for estate residential lots within the Study Area.

8.0 THE RECOMMENDED CONCEPT

8.0 THE RECOMMENDED CONCEPT

8.1 INTRODUCTION

The Recommended Concept has been developed in response to the findings of the market potential study prepared by Hemson Consulting Ltd. (May, 1987) which assessed the market for the land uses proposed in the Revised Concept. Several recent developments including interest on the part of potential land purchasers and the selection of an alignment for the Maple Grove Road connection to New Highway 24 have also resulted in changes to the original concept.

This chapter reviews the Recommended Concept, highlighting the revisions to the Revised Concept and discusses the servicing and policy implications of the proposed land use arrangement.

For the purposes of discussion, Development Areas labeled "A" through "H" have been delineated on Map 17 - Recommended Concept. These represent areas of contiguous land use which are subject to similar physical, policy or servicing constraints which in turn will determine the timing of development.

8.2 GENERAL DESCRIPTION

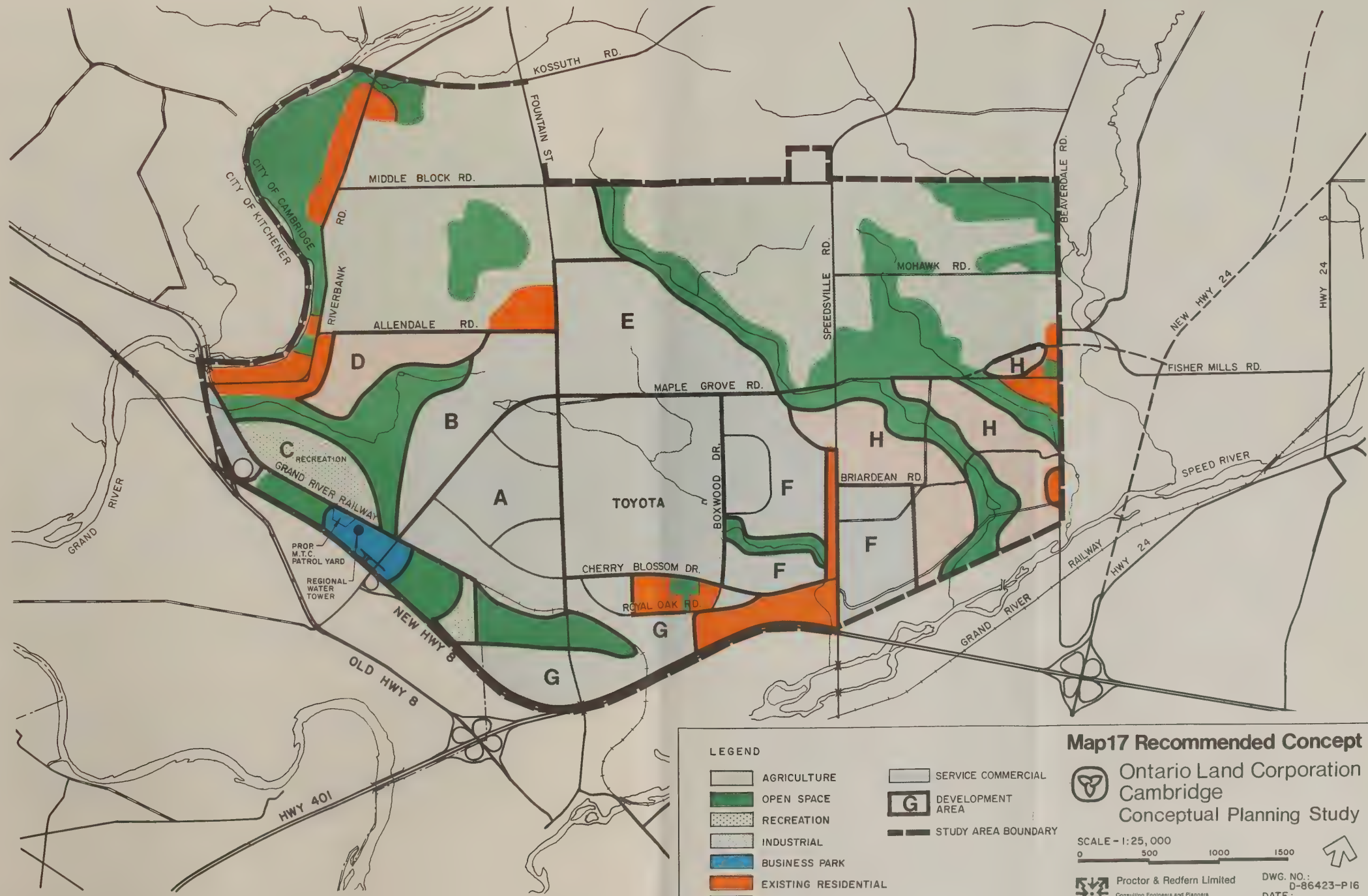
The Recommended Concept adheres to the General Guidelines discussed in Chapter 6.0, retaining the overall land use pattern of the Revised Concept. The revisions generally involve adjustments to the land use boundaries rather than major relocations or the introduction of new uses.

The estate residential designation has been reduced in size in accordance with the recommendations of the market study. Due to an oversupply of estate lots elsewhere in the Region and the relatively slow absorption rate, 172 hectares (+/- 425 acres) have been retained for current and future use. Of this amount 94 hectares (+/- 232 acres) is currently being developed under private ownership.

The market study indicates that a substantial demand exists for industrial land in Cambridge. Consequently, 28 hectares (+/- 69 acres) in Development Area "B" north of the Maple Grove Road extension have been reallocated to industrial use.

Development Area "C", north of the Grand River Railway is now allocated exclusively to recreational uses, which may include a golf course.

Other relatively minor revisions will be noted in the detailed description of specific land use areas which follows.



LEGEND

- | | |
|----------------------|---------------------|
| AGRICULTURE | SERVICE COMMERCIAL |
| OPEN SPACE | DEVELOPMENT AREA |
| RECREATION | STUDY AREA BOUNDARY |
| INDUSTRIAL | |
| BUSINESS PARK | |
| EXISTING RESIDENTIAL | |
| ESTATE RESIDENTIAL | |

Map17 Recommended Concept

Ontario Land Corporation
Cambridge
Conceptual Planning Study

SCALE - 1:25,000
0 500 1000 1500



Proctor & Redfern Limited
Consulting Engineers and Planners
Kitchener

DWG. NO.: D-86423-P16
DATE: APRIL 1988

The land budget for the Recommended Concept is shown on Table 3.

8.3 INDUSTRIAL

The Recommended Concept allocates 626 hectares (+/- 1547 acres) to industrial use. This total includes the Toyota plant site (162 hectares/+/- 400 acres) and the Ariscraft parcel (41 hectares/+/- 101 acres). Total additional industrial land is 423 hectares (+/- 1,046 ares). The market study indicates that a strong demand exists for industrial land in the north Cambridge area, therefore all industrial designations in the Revised Concept have been maintained and Area "B" north of the Maple Grove Road extension has been enlarged, with a consequent reduction in the areas previously designated in the Revised Concept - Map 15 as Estate Residential, Business Park and Open Space.

Planning for development within the Study Area gives rise to a number of servicing and transportation related issues which have wider implications both for the City of Cambridge and for the Region.

The water, sanitary sewer and stormwater facilities completed under Phase 1 of the agreement to service Toyota and those scheduled for construction in Phase 2 will be adequate to service much of the proposed industrial development within the Study Area.

Although water supply, transmission and storage facilities are generally in place to serve an area of approximately 110 hectares (+/- 272 acres) an adequate water supply to serve long-term development will not be available until the year 1991 when a new Regional supply system is expected to be in operation. The Preston Sewage Treatment Plant, which presently has an excess capacity of 1.0 M.I.G.D., will require expansion as development proceeds. Although this work has been included under Phase 2 of the servicing agreement, the timing will be dependent upon the rate of urbanization in the area.

Sewage pumping stations, stormwater management areas and works other than local services, which will be required for the development of specific areas, will be noted in the discussion of those areas.

Phases 1 and 2 of the servicing agreement cover road works which will be required to provide access to and efficient circulation within the Study Area. These include the widening of Maple Grove Road to 4 lanes as needed and an interchange at Highway 8 when warranted. As the M.G.S. land is developed, however, increased traffic volumes will exceed the capacity of these arterials. As an alternative to further widening of Maple Grove Road and Highway 8, the traffic study has suggested that construction of the Fairway Road/Fountain Street link across the Grand River be considered.

Table 3

Recommended Concept - Land Budget

Land Use	Area		Percentage
	Hectares	+/- Acres	
Agriculture (a)	463	1144	26.2%
Open Space	327	808	18.5%
Industrial (b)	626	1547	35.5%
Business Park	14	35	0.8%
Estate Residential (c)	172	425	9.7%
Existing Residential	103	255	5.8%
Commercial-Service	4	10	0.2%
Recreation	59	146	3.3%
Total (a)	1768	4370	100.0%

Notes:

(a) Totals Excludes 3.0 hectare parcel of M.G.S. Land northwest of Middle Block Road and Speedville Road intersection. Identified as Agriculture.

(b) Industrial Land Use By Land Owner	Area		Percentage
	Hectares	+/- Acres	
-Ministry of Government Services (M.G.S.)	356	881	56.87%
-Toyota Corporation	162	400	25.88%
-Arriscraft Ltd.	41	101	6.55%
-Other Private	62	153	9.90%
-Ministry of Transportation & Communication (M.T.C.)	5	12	0.80%
Total	626	1547	100.00%

(c) Estate Residential Land Use by Land Owner	Area		Percentage
	Hectares	+/- Acres	
-Ministry of Government Services (M.G.S.)	78	193	45.35%
-Arriscraft Ltd.	85	210	49.42%
-Other Private	9	22	5.23%
Total	172	425	100.00%

The following discussion of Development Areas "A" through "H", will indicate the road works which will be required prior to the development of each area, according to the findings of the traffic study. This information is approximate only, as the development scenario on which these findings were based differs somewhat from the Recommended Concept with respect to the land use boundaries and the amount of land allocated to each use.

The traffic study also assumes the uniform development of all land uses, whereas this report considers each land use area individually and assumes that some industrial development will occur in advance of any business park or residential development.

8.3.1 Area "A"

Area "A", which consists of 110 hectares (+/- 272 acres) between Fountain Street and the Maple Grove Road extension, will be developed first. Much of this area has been designated "General Industrial" in the Cambridge Official Plan and has been zoned for industrial use subsequent to the removal by amendment to the By-law of the "H" prefix which denotes a holding category. Water and sanitary trunk services will be in place upon completion of the Phase 1 facilities constructed under the agreement between the Province of Ontario and the Toyota Motor Corporation and the current water supply is adequate to service the area.

Storm sewers to direct runoff from part of Area "A" immediately south of the Maple Grove Road extension and from the road itself to the Open Space area to the north for eventual outlet to the Grand River will also be constructed under the first phase of the servicing agreement. Further studies are being undertaken to resolve the location of the stormwater management area, which will be required to serve the southern section of Area "A" that drains to the Speed River.

A preliminary internal road layout connecting the Toyota plant entrance and Royal Oak Road with the Maple Grove Road extension has been developed.

According to the traffic study, a New Highway 8/Maple Grove Road interchange will be required prior to any further development within the Study Area. Highway 8 north of Freeport will require widening to six lanes following the initial development of between 23 and 28 hectares (+/- 57 or +/- 69 acres). This range reflects the use of both high and low trip generation rates in the calculation of traffic volumes.

If a low trip generation rate is used, the development of the remainder of Area "A" will require widening of Maple Grove Road to 4 lanes between Highway 8 and Speedsville Road at an estimated cost of \$1,580,000.00. Using a high trip generation rate, Maple Grove Road will require widening to Highway 24 at a total cost of \$4,718,000.00. The Fairway Road Extension could also be required at an estimated cost of \$7,900,000.00.

Road works required for partial development of Area "A" are shown on Table 4 which indicates the area of land which can be developed prior to roadway construction being required under both the high and low trip generation scenarios.

8.3.2 Area "B"

Beyond the Maple Grove Road extension, the industrial area has been extended westward to the limits of the Cambridge "Open Space" designation and north to Allendale Road to include the area formerly shown as Business Park. The total area is 55 hectares (+/- 136 acres).

The southern section of Area "B" has been zoned for industrial use. The northern section, currently designated "Foodlands", will require an amendment to the Cambridge Official Plan and rezoning.

While the marshy area to the north is adequate to provide natural stormwater detention for runoff from Area "A" and Maple Grove Road, a more formalized management area and improvements to the existing watercourse will be required to accommodate the additional flow generated by development in Area "B".

Assuming that all road improvements required for the full development of Area "A" are in place, under the low trip generation scenario, the development of Area "B" will require the widening of Maple Grove Road between Speedsville Road and Highway 24 to 4 lanes at an estimated cost of \$3,138,000.00. The Fairway Road extension could also be required at this time. If a high trip generation rate is used, these works will already be in place to serve Area "A". The addition of a further 55 hectares (+/- 136 acres) in Area "B" will require the widening of Fountain Street north of Maple Grove Road at an estimated cost of \$2,500,000.00. Table 4 indicates the road works which will be required if development in Area "B" precedes full development of Area "A".

The balance of the industrial district remains as in the Revised Concept.

TABLE 4
Road Improvements Required By Area

Cumulative Area of land that can be developed prior to roadway construction being required		Link Requiring Construction When Development has taken place	Cost of Link Improvement	Cumulative Cost of Link Improvement
Low Trip Generation Rates (ha)	High Trip Generation Rates (ha)			
---	---	New Hwy 8 Interchange (1)	\$ 1,500,000.00	
28	23	New Hwy 8 widening north of Freeport	N/A	----
55	38	Maple Grove Rd. widening between Hwy 8 & Fountain (2-4 lanes)	\$ 750,000.00	\$750,000.00
99	71	Maple Grove Rd. building between Fountain & Speed- ville (2-4 lanes)	\$ 830,000.00	\$1,580,000.00
118	84	Maple Grove Rd. widening between Speedsville & Beaverdale (2-4 lanes)	\$ 1,550,000.00	\$3,130,000.00
118	92	Maple Grove Rd. widening between Beaverdale & Hwy 24	\$ 1,588,000.00	\$4,718,000.00
140	97	Fairway Rd. extension	\$ 7,900,000.00	\$12,618,000.00
180	127	Fountain St. widening north of Maple Grove (2-4 lanes)	\$ 2,500,000.00	\$15,118,000.00

Notes:(1) Timing of interchange construction is flexible but is not required for development and will be constructed by Province as and when required. Widening of Hwy. 8 will also be a Provincial responsibility.

N/A: Not Applicable

SOURCE: Study of traffic in vicinity of O.L.C. Development - McCormick Rankin, 1987.

8.3.3 Area "E"

Area "E" which consists of 107 hectares (+/-264 acres) north of Maple Grove Road can easily be serviced by extending the Fountain Street trunk sanitary sewer. This area is currently within Regional Settlement Policy Area "E" and the present agricultural designations would have to be amended.

The Toyota - North Cambridge Development Impact Study prepared by the Region recommends that development of these lands be considered only on the basis of a compensating reduction on lands currently within Settlement Policy Area "A".

Area "E" will require a water detention facility to control runoff prior to discharge into the storm sewer diversion which outlets into West Creek.

8.3.4 Area "F"

To the east of Toyota, Area "F" extends eastward from East Boundary Road to the existing residential community along Speedsville Road, including 76 hectares (+/-188 acres) of industrial land. This area is currently designated "Foodlands" in the Cambridge Official Plan.

Before serviced industrial development can occur in Area "F", a sewage pumping station and force main as shown on Map 9 - Sanitary Sewers, will be required to direct flow to the Fountain Street trunk sanitary sewer. The estimated cost of the sewage pumping station is \$400,000.00.

A stormwater management facility will be required to regulate flow into West Creek.

No further road improvements will be required for development of Area "F" provided that full development of Areas "A", "B" and "G" has already occurred. For a low trip generation rate, the widening of Fountain Street north of Maple Grove Road will be required in addition to those road improvements completed for Areas "A" and "B" if Area "G" has not been developed.

The Recommended Concept recognizes the existing Arriscraft plant site east of Speedsville Road as a developed industrial activity in Area "F". It is zoned to permit the extraction of sand and the manufacture of decorative brick.

8.3.5 Area "G"

Area "G" extends from Cherry Blossom Drive south of Toyota to Highway 401 and includes 78 hectares (+/-193 acres) of industrial land. This consists of two privately owned parcels east and west of Fountain Street, land owned by Toyota between Cherry Blossom Drive and Royal Oak Road and M.G.S. land between Royal Oak Road and the Grand River Railway.

This area has been designated "General Industrial" and "Corridor Industrial" in the Cambridge Official Plan and is zoned to permit general industrial uses.

The existing sanitary and water services will be adequate to service development in Area "G". The Stormwater Management facility in Area "A" will serve part of Area "G", but local facilities may be required elsewhere to restrict flow to the capacities of the culvert under Highway 401.

The road network which will be in place following full development of Areas "A" and "B" will be adequate to serve Area "G" as well. If the development of Area "G" precedes development of Area "B", the required road improvements will be identical to those required for Area "B", including the widening of Maple Grove Road and the extension of Fairway Road under the low trip generation scenario and the widening of Fountain Street north of Maple Grove Road under the high trip generation scenario.

8.3.6 Kitchener

In Kitchener, the industrial area bounded by the Cambridge municipal boundary and Highway 8 has been retained as shown on the Revised Concept. This area may be developed in conjunction with the adjacent privately owned industrial lands in Cambridge.

8.4 BUSINESS PARK

The market study supports the designation of business park areas on the basis of demand for service commercial uses generated by the industrial area and the long-term potential for a hotel/motel development.

The Business Park at the intersection of Maple Grove Road and Fountain Street has been deleted since the Cambridge Industrial Areas Zoning By-law permits business park uses in the corridor industrial zones.

The 7 hectares (+/- 17 acres) business park in Kitchener at New Highway 8 has been expanded to 14 hectares (+/- 35 acres) to include the M.T.C. Patrol Yard and Regional Water Tower sites. The suggested zoning under the Kitchener Industrial and Open Space By-law is the Business Park Service Centre Zone (B-3). While this zoning permits a number of uses including offices, service commercial, hotels and restaurants, the selection of specific uses can not be made on the basis of the market study findings.

A sewage pumping station shown as Future Sewage Pumping Station No. 2 on Map 9 - Sanitary Sewers, will be required to service the Kitchener Business Park at an estimated cost of \$200,000.00.

8.5 RESIDENTIAL

While the existing residential areas and the estate residential lands east of Speedsville Road are to remain as shown in the original concept, the estate residential areas west of the Maple Grove Road Extension have been altered substantially.

The market study indicated that the original estate residential designations could not be supported on the basis of market demand and that the lack of visual amenities and the proximity of incompatible land uses such as industrial development, transportation and power corridors further reduce the market potential of the estate lands in the west.

Consequently, Area "C" consisting of 43 hectares (+/- 106 acres) north of the Grand River Railway has been removed from the estate residential designation in total in order to realize opportunities for recreational uses.

Residential development along Allendale Road in Area "D" has been reduced in total size to 41 hectares (+/- 101 acres) to accommodate additional industrial development. However, it has been extended geographically southward to the limits of the Open Space designation in the Cambridge Official Plan. This area abuts the existing Freeport community and is buffered from the industrial uses to the south by the open space. A trunk watermain along Riverbank Road, Allendale Road and Fountain Street will be required to service residential development in Area "D".

To the east, where the topography and vegetation provide a more interesting setting for estate residential development, 129 hectares (+/- 319 acres) in Area "H" have been retained in this use. The selection of a more northerly route for the Maple Grove Road extension to New Highway 24 and the shift in the Regional Settlement Policy Area "E" boundary make an additional 5 hectares (+/- 12 acres) north of the existing Maple Grove Road alignment available for estate residential development.

The Briardean Estates proposal in Area "H" may be viewed as an extension of the estate residential community now being developed on the Arriscraft lands west of Beaverdale Road. A detailed study in support of this proposal has been completed and it is likely that this area will be developed first.

The study indicates that the construction of raised leaching beds for private septic systems will be required in areas of poor soil drainage in the Briardean area. These conditions appear to be prevalent throughout Area "H" and will present similar constraints to development.

All areas allocated to Estate Residential use in the Recommended Concept with the exception of the Arriscraft Lands are currently designated "Foodlands" in the Cambridge Official Plan and will require an Official Plan amendment and rezoning prior to development.

8.6 RECREATION

The Recommended Concept allocates two major land areas to recreational use.

Area "C", a 43 hectare (+/- 106 acre) area north of the Grand River Railway in Cambridge is a suitable site for a large scale recreational use such as a golf course. This use would be compatible with the surrounding open space areas.

The primary access to the proposed recreational facility would be from Riverbank Drive. An emergency or service access to Maple Grove Road could be located along the north side of the railway.

Area "C" is presently designated "Foodlands" in the Cambridge Official Plan. An amendment to redesignate the area to "Class 2 Open Space", which permits large scale public and private recreation facilities and a rezoning to "Open Space 2" would be required to permit the development of a golf course.

In Kitchener, part of the open space area, totaling 16 hectares (+/- 40 acres), identified on the earlier concepts has been shown as "Recreation" in the Recommended Concept to reflect the recreational uses permitted in the Commercial Open Space Zone (P-5) which include hotels, restaurants, campgrounds and other commercial facilities.

8.7 OPEN SPACE

The Open Space area to the west of the Maple Grove Road extension has been reduced in size to accommodate further industrial and residential development. Its boundaries now coincide with the Cambridge Official Plan designation, extending southward to the Grand River Railway.

All other Open Space areas in Cambridge have been retained as shown on the Revised Concept. These include the "Open Space" designations in the Cambridge Official Plan and an additional woodlot north of Allendale Road.

In Kitchener, the wetland area which is unsuitable for development and the buffer area northwest of the proposed M.T.C. patrol yard have been retained as Open Space.

8.8 AGRICULTURE

With the exception of Area "E", all land north of Maple Grove Road and Allendale Road is to remain in agricultural use. As no development has been proposed north of Allendale Road, this area could be redesignated to Settlement Area "E" in the Regional Official Plan.

8.9 IMPLEMENTATION

This report has been prepared to serve as the planning component for the Region and City of Cambridge's requirements that a study of the Provincial landholdings be undertaken prior to the development of the lands. The Recommended Plan will be implemented through the normal planning process. Amendments will be required for both the Region of Waterloo and City of Cambridge Official Plans. Appropriate zoning amendments will be needed for the lands in Cambridge and a resolution to the deferred status of the Provincial Lands in the City of Kitchener will also be finalized.

Although this Planning Study was undertaken during 1986-87 and was based, in part, on market information prepared in May, 1987, it is intended that more recent marketing data will be made available when specific applications for Official Plan Amendments are made.

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BIBLIOGRAPHY

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APPENDICES

A. Terms of Reference

TERMS OF REFERENCE

PHASE I

Conceptual Planning Study

BACKGROUND

In the late 1960's, the City of Kitchener and OHC undertook a housing market study. The results showed that a strong growth base in the area was to continue and that the urban areas of Kitchener, Waterloo, Galt, Hespler and Preston would eventually meld into a large Metropolitan area.

In order to meet the needs of this impending growth, it was agreed that a land assembly was needed and at the request of Galt, Hespler and Preston, OHC began assembling land. During 1968, the Province purchased 1202 ha (2,971 acres) of land located in Lots 9-13, Concession 1, Beasley's Lower Block, and in Lots 8 and 9 and 13-22 of Beasley's Broken Front Concession in what was then Waterloo Township. With the reorganization of local government, the majority of the lands became part of the City of Cambridge and a small area lying between Hwy #8 and the CNR right-of-way fell within the City of Kitchener.

In 1975, OHC commissioned the firm of John Bousfield Associates with William E. Coates and Associates., and Proctor and Redfern Ltd., to undertake a planning study on the Provincial lands. The study, "A Plan for the Freeport Community" detailed the development potential, transportation and servicing aspects of the lands.

Although this plan never received any approval status as a secondary plan at the Municipal level, portions of the land area described as "employment area" were eventually zoned industrial as an amendment to the Cambridge Official Plan.

Within the Regional Official Plan, approximately two-thirds of the land falls within Policy Area A, which contains the existing settlement areas and areas for potential expansion. The land holdings north of Maple Grove Road and east of Fountain St. fall within Policy Area E, which is essentially an agricultural zone. The Regional Plan also designates a portion of the lands as part of a "Mineral Resource Policy Area A".

The City of Cambridge Official Plan designates parts of the site as industrial, as well as foodlands and Class I Open Space.

The OLC and MTC lands in the City of Kitchener fall within proposed service commercial, industrial and open space designations. These lands have been deferred from the City Plan by the Region pending further study.

During 1984, the Ontario Land Corporation undertook several planning studies to determine potential short and long term development opportunities. The recommendations of these studies resulted in requests to amend the City Official Plan to permit residential development in two sites, one along Riverbank Drive, near Middle Block Road (7 lots) and the other, an estate lot proposal (70 lots)

adjacent to the Arriscraft land holdings between Speedsville and Beaverdale Roads south of Maple Grove Road. These applications are currently on hold pending the results of the overall OLC planning and marketing study.

In December 1985, the Province of Ontario entered into an agreement to sell approximately 160 ha (400 acres) of serviced land to the Toyota Motor Corporation, for an automobile plant. Because of the time constraints of the agreement and the length of the planning approval process, a Minister's zoning order was issued for the Toyota lands zoning them industrial.

The Minister's zoning order was followed in February 1986, with a public meeting at which OLC requested changes to the Cambridge Official Plan and Zoning by-law to bring them into consistency with the proposed Toyota developments. These amendments were approved by the City and are now in the process of approval at the Regional level.

Since December 1985, a number of engineering consultants have been hired by both the Region and the City to prepare the engineering contracts and supervise the servicing infrastructure required by Toyota. In providing the various hard services required by Toyota, the infrastructure is being oversized to reduce future development costs and service disruption. This oversizing will result in about 800 additional acres being developable beyond those owned by Toyota. The accompanying map shows the servicing area and land uses proposed by the City.

OBJECTIVE

To undertake conceptual planning and engineering analysis of the Provincial Land Assembly in Cambridge to determine the most suitable and compatible land uses given the location of the Toyota Motor Corporation Assembly plant, and the capacity of hard services being installed at the present time.

WORK PROGRAM

(1) Evaluation of existing documentation:

- . Review of existing documentation, including Regional and City Official Plans, By-laws and Studies, as well as OLC reports and mapping;
- . Review current engineering data through liaison with Regional and City consultants as specified in the Engineering Section;
- . Contact local planning, engineering and economic development staff to ensure plans and proposals, recognize local policies. This will include liaison with the Cities of Cambridge and Waterloo Regional consultants as required.
- . Specify and make allowances for any additional support studies (not included as part of the work program), that may be required to carry out this study.

(2) Concept Plan:

The consultant will prepare a concept plan and supporting documentation which addresses the following:

- . A description of the planning and its relationship to surrounding lands which includes:
 - Terrain analysis
 - Physical features
 - Vegetation and wildlife
 - Resources
 - Cultural and historical items
- . An evaluation of the present land use proposals in Cambridge and Kitchener.
- . Proposed conceptual land uses for OLC and MTC lands.
- . Proposed support structure which includes road layouts, traffic analysis, sanitary, water and stormwater analysis.

(3) OLC/MTC Lands - City of Kitchener

The consultant will review existing environmental reports and Regional and City plans to determine the most appropriate land use(s) for the Provincial lands in the City of Kitchener. The results of this analysis must be done in a level of detail that will provide for a resolution of the deferment of the designation of the "Open Space" lands in the Kitchener Official Plan.

(4) Provincial Policies

- . The consultant will provide details and recommendations on the relationship to and the impact on the present policy designations of the foodland guidelines as they may be effected by the consultants planning and development proposals.
- . The consultant will provide details and recommendations on the relationship to and the impact on the aggregate resource designations on the land assembly.

(5) Engineering Analysis

A number of engineering consultants are presently under contract with the Region and City for the installation of services required for the Toyota Plant. Since these consultants have already undertaken significant analysis and research, they will be used for the engineering input to the planning study as follows:

- (a) Proctor-Redfern - Sanitary and water service distribution for OLC lands including the Grand River Trunk Scheme;
- (b) M.M. Dillon - Storm water management proposals;
- (c) McCormick Rankin - The road network and traffic analysis;
- (d) Conestoga Rovers - Regional water services in co-operation with Proctor-Redern.

OLC will be paying directly to the engineering firms their costs for required engineering consultant services. The planning consultant will be responsible for the co-ordination of the engineering input and must provide the overall engineering analysis in support of the planning proposals. The planning consultant must budget the monies required for this co-ordination

(6) General Planning Consideration

In addition to the work already outlined, the consultant must address in relationship to the concept plan:

- . The proposed Fairway Road extension.
- . Private ownership in and around the OLC holdings

(7) Municipal Involvement

- . The consultant must budget for joint meetings to be held with municipal employees and the work program as outlined.
- . An upset fee, including disbursements is to be established for the completion of the entire work program.
- . All subconsultants to be used must be identified and their fees be included in the upset limit.
- . The consultant must indicate what monies of the upset fee are included for client meetings, co-ordination and meetings with municipal staff and consultants. Payment will be made only for those meetings identified.
- . Per diem rates, names and a prospectus will be submitted for all staff and subconsultants who will be employed on this job.

- The principal supervisor(s) of this work will be identified.
- An indication of previous work experience of a similar nature and experience in the Cambridge/Kitchener area will be supplied.
- The consultant will budget monies for the printing of the following:
 - 25 copies of draft report
 - 100 copies of an approved report which includes a coloured fold out map of proposed land uses.
- The original camera - ready artwork, suitable for printing will be provided to OLC at the completion of the study.
- The consultant will clearly identify any additional study requirements not included in the proposal.
- Any conflict of interest must be identified.
- Following the completion of a marketing study which will follow the planning study, the consultant may be requested to revise the plan and report. The cost of this work will be negotiated at that time.

GENERAL

The consultant will be expected to enter into a contract with Ontario Land Corporation which will contain standard conditions including:

- The consultant shall use the best available methods in performing the work and shall employ only skilled and competent staff.
- All documents and materials (including all working documents and files, plus originals and plates of the reports), shall be conveyed to OLC either on request or at the end of the contract.
- The OLC shall have the right at all reasonable times to inspect or review the work performed by the consultants.
- Ontario Land Corporation may, at any time, by appropriate notice in writing to the consultant, suspend or terminate the whole or any part of the work.

Rick Benson

STUDIES AVAILABLE

- (1) A Plan for the Freeport Community - John Bousfield, W.E. Coates and Associates and Proctor and Redfern - 1976.
- (2) Development Potential Study for O.L.C. - City of Kitchener, (Esker Study), Planning Initiatives - 1983.
- (3) Development Potential Study - Cambridge Land Assembly, Planning Initiatives - 1984.
- (4) Briardean Estates - Residential Development, M.M. Dillon - 1985.
- (5) Maple Grove Road - Estate Lot Development - Planning Initiatives - 1985.
- (6) The Toyota Motor Corporation Application - Planning Approval - J. Bousfield & Associates Ltd. - 1986.

- Also available are a number of site specific soil test reports done for O.L.C., the Region and City.
- In July 1983, an environmental report on the Maple Grove Road alignments will be completed by Ecoplans.
- Mapping is available at 1:1000 to OBM specifications for most of the land assembly.

**B. City of Kitchener Official Plan
Amendment 27-Pioneer Tower East
Letters from Ministry of
Transportation**

OFFICIAL PLAN AMENDMENT 27

PIONEER TOWER EAST

Adopted by By-law 84-19-P - February 13, 1984

Approved by Regional Council - April 11, 1985

*Approved by Regional Council - June 27, 1985

**Approved by Ontario Municipal Board - February 20, 1986

+Deferred by Regional Council

This document contains an office consolidation of Section 4 of Official Plan Amendment No. 27. For legal Amendments, consult the Kitchener Department of Planning and Development.

OFFICIAL PLAN AMENDMENT 27

PIONEER TOWER EAST

SECTION 4 - THE AMENDMENT

1. Map 1, "Plan for Land Use" is amended as shown on attached Schedule "A".
2. Map 2, "Floodplain and Environmental Areas" is amended as shown on attached Schedule "B".
3. Policy IV.10.xxii is added and shall read:

The following transportation policies will apply to Pioneer Tower East:

- *a) Prohibit new private access points, not existing at the time of approval of this Amendment onto King Street East between Sports-world Drive and Highway 401. The creation of new lots with new access to King Street will not be permitted. Development of lands designated Service Commercial and Industrial should take place by way of internal collector roads intersecting King Street East at signalized intersections. One such collector road will be constructed so as to intersect King Street East approximately midway between Sportsworld Drive and Highway 401. New development by way of severance or subdivision should be back-lotted onto King Street East with access via the internal collector road.

Alternatively, development may front onto King Street East with access via existing legal access points. To minimize the number of access points, a private service road may be constructed which extends to an internal collector road and/or to an existing legal access point onto King Street East. As a further means of minimizing the number of access points, mutual driveways will be encouraged when considering development proposals and redundant access points will be closed at the time of development. Direct access may be permitted onto Sportsworld Drive.

Notwithstanding the restriction of this policy to permit no new private access points, the relocation and redesign of existing access points, including the separation of entry and egress will be permitted on individual properties.

- b) Recognize that the proposed Primary Road is a Regional Road and as such, its extension east of the Highway 8 By-pass will be on the basis of studies which will, among other matters, address the staging and cost of construction and ultimate design and alignment of the roadway.

4. Policy IV.11.xlvi is added and shall read:

The following policies will apply to the development of Pioneer Tower East.

- a) As required in the Regional Official Policies Plan, the boundaries of Policy Area B are defined in this Plan. Accordingly, all of this area is located within Policy Area B of the Regional Plan.
- b) Notwithstanding the designation of Low Density Residential, on those properties on King Street East near the Grand River, certain non-residential uses will be permitted. In addition to those uses normally permitted in Low Density Residential areas, permitted uses will include a market garden or nursery, fruit, flower, or vegetable sales outlet.
- c) Recognize that the boundary of the Major Open Space designation which abuts the Grand River is defined by the Regional Floodline.
- **d) Recognize the trend toward a wider range of land uses within planned industrial areas and the suitability of this area for development as an industrial park.

In addition to uses normally permitted in industrial areas, including restaurants, automobile service stations and banks, uses such as research and development facilities, scientific and technological facilities, computer, electronic and data processing enterprises, firms involved in surveying, engineering, planning and design, hotels, and motels will be permitted.

- **e) Restrict industrial development near any area designated Residential in the Official Plan according to the Ministry of Environment guidelines. The following uses will be prohibited: the primary production of chemicals, rubber, or plastics; the rendering or reduction of animal products; and the tanning or processing of leather or pelts.
- f) Industrial development adjacent to King Street East between the proposed primary road and Highway 401 will be required to be buffered from residential uses in Pioneer Tower West. This buffering will be addressed at the site plan stage and will be by means of landscaping and building setbacks.
- g) New development may proceed in the absence of Municipal water by utilizing private water reservoirs or other means, provided it meets Ontario Fire Code and Ontario Building Code requirements for fire protection. It is recognized that the provision of trunk water services in this area is both a City and Regional responsibility and it is intended that this service will be provided ultimately through the Region and City's Five Year Capital Forecast and/or under the Local Improvement Act.

- h) Permit development utilizing a private water supply for daily use but limit industrial uses to those requiring minimal water supplies until such time as Municipal water is available. Development on private services including all new wells will be subject to the conditions and regulations of the Ministry of the Environment including the provisions of the Ontario Water Resources Act for issuance of a permit to take water. Communal wells will also be subject to appropriate Regional policies and City standards for the size, location and design of water distribution systems
- i) Permit development on private sanitary services subject to Ministry of the Environment regulations.
- + j) Recognize that the boundaries of the Major Open Space designation adjacent to the proposed Highway 8 By-pass are generally shown and acknowledge that they will be defined more accurately following further studies without the necessity for an Official Plan Amendment.
- k) This amendment recognizes the presence of an archaeological site within the boundaries of the plan. The Village of Freeport is an area of known significance. In this area, there will be provision, in consultation with the Regional Archaeologist for the Ministry of Citizenship & Culture, for the undertaking of archaeological resource assessments under the Ontario Heritage Act prior to development or land disturbance.
- l) Require development or redevelopment to meet the "Fill, Construction, and Alteration to Waterways" regulations as well as setback requirements along the "top of bank" lines as administered by the Grand River Conservation Authority.
- m) Notwithstanding the designation of Service Commercial on that area fronting on King Street East immediately south of the Grand River, outdoor storage (except for the display of goods or materials for retail purposes) shall not be permitted.

SCHEDULE 'A'

AMENDMENT TO THE OFFICIAL PLAN

MAP-1

Plan for Land Use



AREA AFFECTED BY THIS AMENDMENT
"ADDED TO THE PLAN FOR LAND USE"



BOUNDARY OF PLAN FOR LAND USE

#4 46

POLICY FOR SPECIFIC AREA

NOTE: ALL THE AREA AFFECTED BY THIS
AMENDMENT IS SUBJECT TO
POLICY, No. 46

DEFERRED

UNDER SECTION 17 (10) OF
THE PLANNING ACT, 1983

MODIFICATION

NO 1

UNDER SECTION 21 (1) OF
THE PLANNING ACT, 1983.

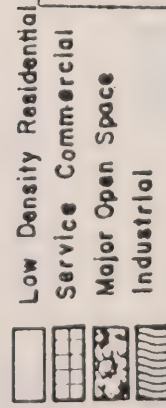
REFERRED
TO O.M.B.

#4
REFERRED
TO O.M.B.

MODIFICATION

NO 1

UNDER SECTION 21 (1) OF
THE PLANNING ACT, 1983.



Low Density Residential

Service Commercial

Major Open Space

Industrial

Trunk Road

Trunk Road (Proposed)

Primary Road


Primary Road (Proposed)


SCALE: 1" = 2000
DATE: SEPT /83.


KITCHENER, DEPT. OF PLANNING AND DEVELOPMENT

SCHEDULE A AMENDMENT TO THE OFFICIAL PLAN

MAP-1
Plan for Land Use

 AREA AFFECTED BY THIS AMENDMENT
"ADDED TO THE PLAN FOR LAND USE"

 BOUNDARY OF PLAN FOR LAND USE

 POLICY FOR SPECIFIC AREA

NOTE: ALL THE AREA AFFECTED BY THIS
AMENDMENT IS SUBJECT TO
POLICY No. 46

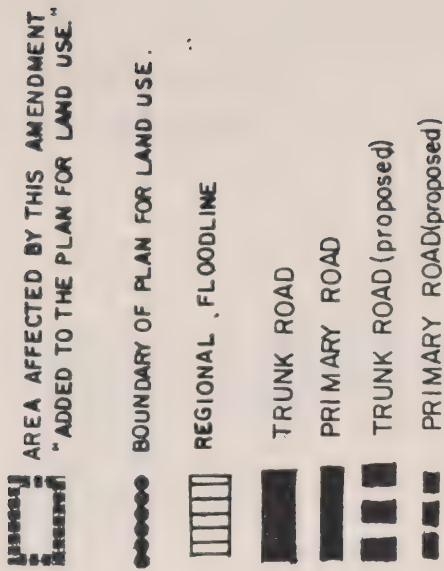


SCALE: 1" = 2000
DATE: SEPT /83.
REV. NOV. 21/84.

WITCHENER, DEPT. OF PLANNING AND DEVELOPMENT
Amendment # 27

MAP-2

Flood Plain and Environmental Areas:





Ontario

OCT 27 1983
REGIONAL PLANNING DEPT.

File

Ministry of
Transportation and
Communications

Corridor Control Section
1201 Wilson Avenue
2nd Floor, West Building
Downsview, Ont.
M3M 1J8

Miss J. Given, Planner
Department of Planning & Development
City of Kitchener
City Hall
Box 1118
Kitchener, Ont.
N2G 4G7

FH

October 24, 1983

Dear Miss Given:

Re: Pioneer Tower East & West Official Plan
City of Kitchener

Further to our letter of July 14th, 1983 and subsequent telephone conversation with your office, we have recently become aware that your draft Official Plan amendment for Pioneer Tower East & West adversely affects lands owned by this Ministry.

The enclosed plan shows Ministry lands which are excess to our highway requirements. These lands are currently designated as Industrial. Your proposed amendment shows our lands as Open Space. We object to our lands being downzoned as there appears to be no reason why our lands should not retain their current Industrial status.

Yours truly,

AZ

A. Zembal
Section Head

AZ/ecg

cc. P. Prepolo
F. Patterson
R. Lupasko
M. of H.
Reg. Mun. of Waterloo ✓



Ontario

APR 6 1984

REGIONAL PLANNING DEPT.

Ministry of
Transportation and
Communications

Corridor Control Section
1201 Wilson Avenue
2nd Floor, West Building,
Downsview, Ont.
M3M 1J8

Regional Municipality of Waterloo
Planning Department
Marlsland Centre
Waterloo, Ont.
N2J 4G7

April 3, 1984

Attention: D. Gosnay

Dear Sir:

Re: Amendments Nos. 27 & 28 - City of Kitchener
Pioneer Tower East & West

This is in reply to your letter dated February 27th, 1984 on the subject noted amendments.

We appreciate that our concerns in regard to limiting commercial access to existing Hwy. No. 8 have been addressed by the Municipality.

It is noted our other concern regarding Ministry lands has been partially observed but the limits of the "Open Space" have not been defined. We recommend these limits be defined prior to approval.

Yours truly,

For: K. Ainsworth
A. Zembal
Section Head

AZ/KA:ecg

cc. MA&H
S.W. Region





Ontario

RECEIVED

NOV 26 1984

PLEASE NOTE
NEW ADDRESS

RECEIVED

NOV 27 1984

Ministry of
Transportation and
Communications

CLERK'S DEPT.

REGIONAL PLANNING DEPT.

Corridor Control Section
Room 226, Central Building
1201 Wilson Avenue
Downsview, Ontario
M3M 1J8

Telephone No. 248-3658

November 23, 1984

Mrs. E. Stettner
Regional Clerk
The Regional Municipality of Waterloo
Marsland Centre
Waterloo, Ontario
N2J 4G7

REGIONAL CLERK	
COPY TO:	FOR:
JEG	COUNCIL
RFR	COMM ✓
CB	REPORT ✓
GPAE	INFO
MG	FILE
ELM	
WET ST ✓	1985
DOV	

Dear Mrs. Stettner:

- Re: 1) Proposed Zoning Change 23-84-K
(B. Calder, Tu-Lane) Kitchener
Highway #8 and #401, District No. 3, Stratford
- 2 & 3) Proposed Official Plan Amendments
OP-27 and 28, Pioneer Tower East and West
Secondary Plans, Kitchener
Highway #8 and #401, District No. 3, Stratford

In response to your October 15th letter, we have the following comments regarding your Council's recommendations:

- 1) PD 87/84 - B. Calder, Tu-Lane Restaurant :

With respect to recommendation 3c) we are not prepared to contribute to the cost of signalization of the Cressman Avenue/Highway No. 8 intersection. We will review any preliminary and final designs for such signalization, but will not initiate the design work. The City and/or developer must be prepared to assume full financial responsibility for any signalization at this location.

We had previously indicated that we would permit a commercial entrance to Highway No. 8 for the proposed restaurant.

cont'd 2

2) PD 146/84 - Pioneer Tower West (OP-28) :

We are still somewhat uncertain regarding the proposed service commercial development along the west side of Highway No. 8 from Highway No. 401 to Pioneer Tower Road. First, we presume that this designation does not include the lands required for our future interchange. We could not issue permits for any development which would conflict with our future requirements.

Second, we had previously expressed concern regarding access to these new commercial uses. Access must be via a local road, as we will not issue permits for new commercial entrances in the proximity of our future interchange area.

Your report recognizes that these lands have access constraints, but the actual wording outlined in Item 4 of your recommendation is not as clear as Item 6 in your report.

Third, Item 7 prohibits all new points of access to Highway No. 8 other than public road intersections. While we have no objections to the City's plan including these access policies which will benefit the highway, this Ministry, as the road authority, would not always be in a position to refuse direct access to existing vacant holdings. Normally, we would grant one residential access for an existing vacant ownership, unless alternate access was available or unless the development conflicted with our future highway designs. Our permit refusals can only be based on conflicts with our highway. These comments are meant to clarify our position regarding M.T.C. permits. We are not objecting to Official Plan Amendment No. 28.

3) PD 143/84 - Pioneer Tower East (OP-27) :

Our comments regarding M.T.C. permits are similar to those outlined for Official Plan Amendment No. 28.

Our main concern with this amendment is the impact of the Open Space designation on M.T.C. owned lands. While Item 7 deals with this problem, we still have reservations in this regard.

Yours truly,



M. Hillier (Mrs.)

For: A. Zembal
Section Head

AZ/MH/jh

cc: F. Lukianow
J. Kernaghan

- 3 -

municipal water is available. Development on private services including all new wells will be subject to the conditions and regulations of the Ministry of the Environment. Communal wells will also be subject to the appropriate Regional policies and City standards for the size, location, and design of water distribution systems. Prior to any new development, studies, as required under the Ontario Water Resources Act, will be undertaken to establish the likely impact on existing privately owned wells within the Pioneer Tower East and West Community areas prior to the issuance by the Ministry of the Environment of a "permit to take water."

5. That a new Policy 1V.11.xlvi(i) be added following Policy 1V.11.xlvi(h) to read as follows:

- 1) Development or re-development must meet the "Fill, Construction and Alteration to Waterways" regulations as well as setback requirements along the "top of bank" administered by the Grand River Conservation Authority.

6. That present Policies 1V.11.xlvi(i),(j) and (k) be re-numbered to policies (j),(k) and (l) respectively.

7. That new Policy 1V.11.xlvi(k) be modified to read as follows:

Recognize that the boundaries of the Major Open Space designation adjacent to the proposed Highway 8 By-pass will be defined more accurately by further studies and amendment to this Plan.

8. That a new Policy 1V.11.xlvi(l) be added which reads as follows:

- 1) The triangular area designated Service Commercial bounded generally by King Street, the Grand River, the Grand River Railway tracks and the lands designated industrial is designated as a Service Commercial Special Policy Area. Policies pertaining to the specific permitted uses, location and design of buildings and site development within this area will be introduced by a further amendment to this plan in co-operation with the City of Cambridge.



Ontario

Ministry of
Transportation and
Communications

Corridor Control Section
Room 226, Central Building
1201 Wilson Avenue
Downsview, Ontario
M3M 1J8

Telephone No. 248-3658

April 11, 1985

RECEIVED

APR 17 1985

REGIONAL PLANNING DEPT.

The Regional Municipality of Waterloo
Marsland Centre
Waterloo, Ontario
N2J 4G7

Attention: F. Watty

Dear Sir:

Re: 1) Official Plan Amendment No. 27
Pioneer Tower East
2) Official Plan Amendment No. 28
Pioneer Tower West

This is in reply to your letter dated March 19, 1985
requesting comments on the subject noted amendments.

The following information is forwarded for your
information:

O.P.A. #27 - Pioneer Tower East :

(i) Recommended Modification #1 (Page 2)

It should be recognized that a portion of the
esker referred to in this modification will be
required for the new Highway No. 8 By-Pass.

(ii) Recommended Modification #2 Access (Page 2)

We are in general agreement with the access
restrictions that would give further support to
this Ministry's access policies.

(iii) Recommended Modification #3 (Page 3)

We acknowledge that the proposed Primary Road is being recognized as a Regional Road. We wish to point out that there will be a significant cost differential of the proposed crossing of this Primary Road with the new Highway No. 8 By-Pass should scheduling permit the construction of the By-Pass prior to the Regional Road. Such costs would be borne by the Region.

X (iv) Recommended Modification #5 (Pages 3 and 4)

This Ministry has not been provided any logical rational as to why the Industrial designation under the Township's old official plan should be changed to Open Space.

In view of the proposed studies to be undertaken in the future to define the limits of Open Space designation, this Ministry wishes to be included in such future studies.

Our concerns in this matter have been forwarded previously to your office and we refer you to our latest letter dated November 23, 1984.

(v) Schedule "A", Map-1, Plan For Land Use

The status of the western leg of the new Highway No. 8 By-Pass at Highway No. 401 leading to the Cambridge By-Pass, may require modification when this Ministry receives a definite response from the Regional Municipality of Waterloo regarding the Transportation Plan Update for this area.

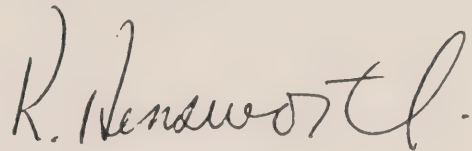
Appendix C

A letter dated March 8th, 1985 was forwarded to the City of Kitchener advising the "proposed" patrol yard and salt domes would not be constructed at the site referred to in this section.

O.P.A. #28 - Pioneer Tower West :

Our chief concern with this amendment relates to the designation of lands along the south side of Highway No. 8 from Pioneer Tower Road 5 to Highway No. 401 as Service Commercial. This Ministry's access policies will not permit commercial access at points which would conflict with interchange ramps and speed change lanes. If this area was served by a service road, reverse frontage and an agreed upon access point, this would go a long way towards relieving our concerns.

Yours truly,

A handwritten signature in dark ink, appearing to read 'K. Ainsworth', with a stylized flourish at the end.

K. Ainsworth

AZ/KA/jh

For: A. Zembal
Section Head

cc: Southwestern Region
M.A. & H.

**C. Kitchener By-law 86-67,
Section 25 Business Park
Service Centre (B-3) Zone
Section 30
Commercial Open Space (P-5) Zone**

SECTION 25
BUSINESS PARK SERVICE CENTRE ZONE (B-3)

No person shall erect, nor use any building in whole or in part, nor use any land in whole or in part, within a B-3 Zone for any purpose other than one or more of the following uses, or uses accessory thereto. Such erection or use shall also comply with the prescribed regulations:

25.1 PERMITTED USES

Automobile Service Station
Beverage and Beverage-making equipment sales
Building material and Decorating supply sales
Carwash
Commercial parking facility
Commercial recreation
Commercial weighing
Computer, Electronic or Data processing business
Convenience retail
Craftsman shop
Day care facility
Dwelling units
Educational establishment
Exhibition or display facility
Financial establishment
Funeral home
Garden Centre and Nursery
Hotel
Industrial administrative office
Laboratory
Manufacturing
Medical clinic

Medical office

Office

Personal services

Printing establishment

Private club or lodge and Union Hall

Religious institution

Repair Service

Research and development establishment

Restaurant

Sale and Storage of Heating fuel

Sale of Monuments

Sale, rental or service of Business machines and Office supplies

Sale or rental of Furniture and Electric or Electronic Appliances or Electric or Electronic Equipment

Sale, rental, service, storage or repair of Motor Vehicles, Major Recreational Equipment and Parts and Accessories for Motor Vehicles or Major Recreational Equipment

Sale, rental, storage or service of Tools and Industrial or Farm equipment

Scientific, technological or communications establishment

Security or janitorial services

Studio

Surveying, engineering, planning or design business

Tradesman or Contractor's establishment

Transportation depot

Truck transport terminal

Veterinary Services

Warehouse

Wholesaling

SECTION 30
COMMERCIAL OPEN SPACE ZONE (P-5)

No person shall erect, nor use any building in whole or in part, not use any land in whole or in part, within a P-5 Zone for any purpose other than one or more of the following uses, or uses accessory thereto. Such erection or use shall also comply with the prescribed regulations:

30.1 PERMITTED USES

Campground

Commercial entertainment

Commercial parking facility

Commercial recreation

Conference or convention facility

Craftsman shop

Exhibition or Display Facility

Hotel

Restaurant

Studio

30.2 REGULATIONS

Minimum Lot Width	16.0 metres
Minimum Front Yard or Side Yard Abutting A Street	6.0 metres
Minimum Side Yard	3.0 metres
Minimum Rear Yard	7.5 metres except where the rear lot line abuts a rail- way right-of-way, in which case no rear yard shall be required."

D. Cost Sharing Agreement

COST SHARING AGREEMENT

The servicing infrastructure required for the Toyota Motor Corporation and surrounding lands involved the construction of significant roadways, watermains, storm drainage facilities and sanitary sewers. The following is an itemized list of the infrastructure elements which have been constructed for the Toyota facility or will be required to be constructed as development surrounding Toyota occurs.

1) Requirements for the Toyota Facilities

The following works were required for the Toyota facilities and the expenditures for this infrastructure were shared by the Province, the Region of Waterloo and the City of Cambridge.

Roadways

- Maple Grove Road/Sportsworld Drive Extension
- Maple Grove Road (Reg. Road #17 to East Boundary Road)
- Reg. Road #17 (Maple Grove Road to Royal Oak Road)
- Maple Grove Road (East Boundary Road to Reg. Road #32)
- Maple Grove Road Extension (Reg. Road #32 to #24 Bypass)
- New Road on east boundary of Toyota site (Boxwood Drive)
- New Road on south boundary of Toyota site (Cherry Blossom)
- Street lighting on east boundary and south boundary roads

Watermains

- Duke Street to Kitchener Drive along Fountain Street to Maple Grove Road
- River Road to Sportsworld Drive Extension
- Grand River Railway to Fountain Street at Maple Grove
- Eagle Street to Kress Hill Pumping
- Kress Hill Pumping Station (new)
- Eagle Street to Dolph Street
- Equipment - pumping stations
- Lang's Drive to Industrial Road

Sanitary Sewers

- ° Fountain Street to Maple Grove Road
- ° Clarifier covers at Preston sewage treatment plant

Storm Sewers and Drainage

- ° Provide new storm outlet to Speed River
- ° Diversion of Creek to north and east sides of Toyota site

3) Requirements for the MGS Lands adjacent to Toyota

There will be requirements for the upgrading of roads as the Provincial lands adjacent to Toyota develop. The first 400 acres of development will require upgrading of roads as well as additional water and sewer facilities outside of those normally provided by a developer.

- (a) The following road facilities will require upgrading during the development of the 400 acres. These road costs will be paid for by the Province. Construction of these works will be staged as warrants for them occur.

- ° widening of Maple Grove Road from 2 lanes to 4 lanes
- ° Highway 8 to Fountain Street
- ° Fountain Street to East Boundary Road
- ° East Boundary Road to Beaverdale Road
- ° Beaverdale Road to Highway 24 Bypass

- (b) The following works will also require construction during the development of the Provincial lands. However, their requirements are not exclusive to the development of the Provincial lands as there will be benefits to other private landowners as well. Therefore, the cost of these works will be borne by both the Province and the Region, with the Provincial share being based on its benefitting land area.

Water

- ° New water tower near Highway 8 and Maple Grove Road

Sanitary Sewers

- ° Forcemain and siphon

